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SAINT LOUIS,

THE

FUTURE GREAT CITY

OF THE

WORLD.

BY L. U. REAVIS.

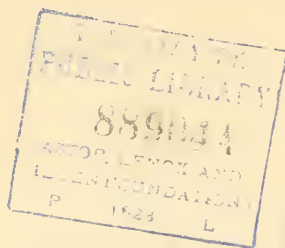
FOURTH EDITION.

Henceforth ST. LOUIS must be viewed in the light of her future—her mightiness in the empire of the world—her sway in the rule of States and nations.

ST. LOUIS:

PRINTED BY E. F. HOBART & CO.

1873.



Entered according to act of Congress, in the year 1873, by

L. U. REAVIS,

In the office of the Clerk of the District Court of the United States in and for the
Eastern District of Missouri.

Dedication.

TO JAMES B. EADS,

THE SELF-MADE MAN, THE PATRIOT CITIZEN, THE GENEROUS

FRIEND, AND THE GENIUS OF RARE SKILL, WHO,

WITH UNRIVALLED ENTERPRISE, PROJECTED

AND CONSTRUCTED THE ILLINOIS

AND ST. LOUIS BRIDGE,

THIS WORK,

DEVOTED TO THE FUTURE OF A CITY WHOSE

BEST HOPE IS IN SUCH MEN, IS RE-

SPECTFULLY INSCRIBED BY

THE AUTHOR.

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EXPLANATORY.

THIS IS DESIGNED TO BE A PRESENTATION OF CAUSES IN NATURE AND CIVILIZATION, WHICH, IN THEIR RECIPROCAL ACTION, TEND TO FIX THE POSITION OF THE FUTURE GREAT CITY OF THE WORLD IN THE CENTRAL PLAIN OF NORTH AMERICA ; SHOWING THAT THE CENTER OF THE WORLD'S COMMERCE AND CIVILIZATION WILL, IN LESS THAN ONE HUNDRED YEARS, BE ORGANIZED AND REPRESENTED IN THE MISSISSIPPI VALLEY, AND BY ST. LOUIS, OCCUPYING, AS SHE DOES, THE MOST FAVORABLE POSITION ON THE CONTINENT AND THE GREAT RIVER ; ALSO, A COMPLETE REPRESENTATION OF THE GREAT RAILWAY SYSTEM OF ST. LOUIS, MAKING HER THE GREATEST RAILWAY CENTER IN THE WORLD.

PROPHETIC VOICES ABOUT ST. LOUIS.

St. Louis alone would be an all-sufficient theme; for who can doubt that this prosperous metropolis is destined to be one of the mighty centers of our mighty Republic?—CHARLES SUMNER.

Fair St. Louis, the future Capital of the United States, and of the civilization of the Western Continent.—JAMES PARTON.

A glance at the map of the United States shows what an interesting place St. Louis is destined to become, when the white population has spread itself more westwardly from the Mississippi and up and along the Missouri river, perhaps it may yet become the capital of a great nation.—DUKE OF SAXE, WEIMAR EISENACH. *Travels in North America in 1825-26.*

NEW YORK TRIBUNE, }
NEW YORK, February 4, 1870. }

DEAR SIR: I have twice seen St. Louis in the middle of winter. Nature made her the focus of a vast region, embodying a vast area of the most fertile soil on the globe. Man will soon accomplish her destiny by rendering her the seat of an immense industry, the home of a far-reaching, ever-expanding commerce. Her gait is not so rapid as that of some of her Western sisters, but she advances steadily and surely to her predestined station of first inland city on the globe.

Yours,

HORACE GREELEY.

L. U. REAVIS, ESQ., *Missouri.*

I also remember that I am in the city of St. Louis—destined, ere long, to be the greatest city on the continent (renewed cheers); the greatest central point between the East and the West, at once destined to be the entrepot and depot of all the internal commerce of the greatest and most prosperous country the world has ever seen; connected soon with India by the Pacific, and receiving the goods of China and Japan; draining, with its immense rivers centering here, the great Northwest, and opening into the Gulf through the great river of this nation, the Father of Waters—the Mississippi. Whenever—and that time is not far distant—the internal commerce shall exceed our foreign commerce, then shall St. Louis take the very first rank among the cities of the nation. And that time, my friends, is much sooner than any one of us at the present time actually realizes. Suppose that it had been told to you—any one of you here present, of middle age—within twenty years past, that within that time such a city should grow up here, with such a population as covers the teeming prairies of Illinois and Indiana, between this and the Ohio, who would have realized the prediction? And so the next quarter of a century shall see a larger population west of the Mississippi than the last quarter of a century saw east of the Mississippi; and the city of St. Louis, from its central location, and through the vigor, the energy, the industry and the enterprise of its inhabitants, shall become the very first city of the United States of America, now and hereafter destined to be the great republican nation of the world.—*Extract from a speech delivered in St. Louis, October 13, 1866, by GEN. B. F. BUTLER.*

Now, sir, when I see this country, when I see its vastness and its almost illimitable extent; when I see the keen eye of capital and business fastened with steady, interested gaze upon the trade of the West, and all our Eastern cities in hot rivalry are reaching out their iron arms to secure our trade; when I see the railroads that are centering here in St. Louis; when I see this city, with 60,000 miles of railroad communication and 100,000 miles of telegraphic communication; when I see that she stands at the headwaters of navigation, extending to the north 3,000 miles, and to the south 2,000 miles; and when I see that she stands in the center of the continent, as it were; when I see the population moving to the West in vast numbers; when I see emigration rolling toward the Pacific, and all through these temperate climes I hear the tramp of the iron horse, on his way to the Pacific Ocean; when I see towns and villages springing up in every direction; when I see States forming into existence until the city of St. Louis becomes the center, as it were, of a hundred States, the center of the population and the commerce of this country—when I see all this, sir, I feel convinced that the seat of empire is to come this side of the Alleghanies; and why may not St. Louis be the future Capital of the United States of America?—[*Extract from a Speech of SENATOR YATES.*]

If it were asked whose anticipations of what has been done to advance civilization, for the past fifty years, have come nearest; the truth—those of the sanguine and hopeful, or those of the cautious and fearful—must it not be answered that none of the former class had been sanguine and hopeful enough to anticipate the full measure of human progress since the opening of the present century? May it not be the most sanguine and hopeful only, who, in anticipation, can attain a due estimation of the measure of future change and improvement in the grand march of society and civilization westward over the continent?

The general mind is faithless of what goes much beyond its own experience. It refuses to receive, or it receives with distrust, conclusions, however strongly sustained by facts and fair deductions, which go much beyond its ordinary range of thought. It is especially skeptical and intolerant toward the avowal of opinions, however well founded, which are sanguine of great future changes. It does not comprehend them, and therefore refuses to believe; but it sometimes goes further, and, without examination, scornfully rejects. To seek for the truth is the proper object of those who, from the past and present, undertake to say what will be the future, and, when the truth is found, to express it with as little reference to what will be thought of it as if putting forth the solution of a mathematical problem.—[J. W. SCOTT.]

Office of The Tribune.

New York, Feb. 4, 1870

Dear Sir: I have twice seen
St. Louis in the middle of Win-
ter. Nature resides here the
focus of a vast region embody-
ing a vast order of the most
fertile soil on the globe. ~~There~~
you will soon accomplish
no destiny by rendering
on the spot of an immense
industry, the home of a
free, obedient, ever-expanding
commerce. Her exit is
not to robill or trot of
some of her Western sisters,
but she advances steadily
and surely to her broad-
ened sphere of first world
city on the globe.

Yours,

L. M. Reavis, Esq. Her ace Evedg

St. Louis, the Metropolis of the Mississippi Valley.

LETTER FROM JUDGE NATHANIEL HOLMES.

L. U. REAVIS, ESQ.—DEAR SIR:—Since you do me the honor to suppose that my ideas on the subject of your book may have some value, or some interest, I venture to lay the following observations before you for what they may be worth.

The great cities of the world were not built in a day. The populous cities of the ancient world were indeed situated in the fertile valleys of great rivers, and far from the sea; as Thebes and Memphis on the Nile, Ayodha on the Ganges, and Babylon and Nineveh on the plains of Mesopotamia; and some others again, like the primeval Sogd and Balkh, upon elevated interior plateaus. They were the work of centuries, and some of them survived the vicissitudes of several thousand years. The strides of the central marts of European commerce from Alexandria to Venice, to Lisbon, to Amsterdam, to London, are measured by periods of centuries. Population and trade move at more rapid rates in our time. Imagination easily leaps over a thousand years. It is not impossible that our city of St. Louis may be "the future great city of the world," but if we are to come to practical facts for our day and generation, and take the safe and sure way, I think we may be content to set it down as both the present and future great city of the Mississippi Valley.

The first leading feature that impresses me is this: that St. Louis is a central mart, seated on the great southern water-line of transport and traffic, by the river, the gulf, and the ocean; and that Chicago is another, less central or quite eccentric, situated at the end of the great northern line of traffic and travel, by the lakes, canals, and rivers to the sea. Both are, and will be, great centres for internal distribution; but St. Louis is, or will be, in all the future, in this, the more central and important of the two. For exportation of products, Chicago has been, of recent years, the greater in quantity and value; but St. Louis, in this, has of late rapidly approached her, and in the near future may be expected even to surpass the City of the Lakes. Both reach out over the vast, fertile areas extending from the Alleghanies to the Rocky Mountains and beyond, and from the northern boundary to the Gulf of Mexico, to grasp in the growing trade of the valley, both of import and export. Chicago reaches out by railroads; St. Louis, by both railroads and rivers. And here it may be well to mark the changes that have taken place in the last thirty-five years or so.

In 1839 (say), Chicago had vessels on the Lakes (there were no railroads in those days), and had some four or five thousand inhabitants gathered upon a

mud flat at the mouth of a deep ditch; and a traveler could go by stage to La Salle, or Peoria, and thence by steamer to St. Louis; or he could take the stage to Detroit, if he thought the voyage through Lake Huron would be too long, or if the lakes were frozen up. Galena, the chief town of the Upper Mississippi, was nearly beyond all practical access from that quarter, and her rich productions in lead and all her trade had to come down the river to St. Louis. St. Louis then had some sixteen thousand inhabitants, spreading over beautiful slopes and levels, and rested on solid foundations of building rock and brick earth, and commanded the whole navigation and trade of the rivers, from New Orleans to the falls of St. Anthony, and from Pittsburgh to where Fort Benton now is, and beyond to the region of furs, and up and down the Illinois, the Arkansas, the Cumberland and the Tennessee rivers. As to navigation, it was all the same thing then, and is now, and always will be, as if all these rivers met at one common point of junction, here at St. Louis; for each one, counting the Upper and the Lower Mississippi as two, had then, and still has, its own distinct trade and class of steamboats. But then, too, the greater part of Illinois and Michigan, nearly the whole of Wisconsin, Minnesota and Iowa, all Nebraska and Kansas, and the entire region westward to the Rocky Mountains and to the Pacific Ocean, was a wide, howling wilderness, and a mere hunting-ground for the Indians.

There was, of course, a large internal traffic, and a very considerable import and export trade through New Orleans and the sea, and through Pittsburg and the Ohio, to the Eastern cities and to Europe, and to Brazil and the Islands and shores of the Gulf of Mexico. Emigration swarmed to the West from all the States of the Union, and from half the States of Europe. It astonished none but the blind that the population of St. Louis grew, in twenty years, from sixteen to one hundred and sixty-two thousand. That in ten years more, (from 1860 to 1870), during the war period, it grew to 310,000, might well astonish the most sanguine. Nearly all the heavy groceries (salt, sugar, molasses, coffee, &c.,) from Louisiana, the West Indies and Brazil, and a large part of the heavier kinds of merchandise from Europe (iron, tin, hardware, crockery and liquors, German gimeracks included,) were then, as they are now (with the addition of many other leading articles), and will continue to be more and more in the future, imported, either directly, or more or less indirectly, into St. Louis, and distributed from this market; and the bulky products of the surrounding country, that could be spared to go abroad, were exported mainly by the same channels. Such manufactures as could be made here, and were in demand for the western country, rapidly grew up, and the manufacturers (as of stoves, castings, saddlery, mill machinery, steamboat machinery, white lead and oil, refined sugar, bagging and bale-rope, tobacco, &c., &c.,) grew rich. And St. Louis had overtaken Cincinnati before the war. Five years ago, the value of the imports, paying duties here, or at New Orleans, was five millions; this last year it was eleven millions. This must be taken as simply the small beginnings.

The railroad system, in its westward movement, embraced Chicago first; the regions immediately around Chicago first became the more densely settled and

cultivated; and Eastern capital pushed her railroads out in all directions, largely taking away the trade of the Northwest from the rivers and St. Louis, and they had extended them even into Northern Missouri, when the war shut up the Mississippi, and also stopped the progress of our incipient railroads; and then, of course, the larger part of the trade went to Chicago, because it could go nowhere else. In the earlier days of the railroad era (you may have heard), it was with great difficulty that a charter could be obtained from the Illinois Legislature for the Ohio & Mississippi Railroad to terminate at St. Louis. Alton was to be the future great city. The Chicago and Alton Railroad had to stop short at Alton, and so the Alton and Terre Haute Railroad; but at length some shrewd operators managed to get a charter for a new road from Alton to Belleville, leaving the route so vaguely defined in the bill, that it admitted of being so warped to one side in the location as to touch the river opposite to St. Louis, on its way to Belleville; and so the terminus was practically established where the exigencies of commerce required it to be. The result, now, is a second railroad straight from St. Louis to Terre Haute, and a great bridge for the accommodation of that and all the rest, which now seek a common depot in the heart of the city. In like manner, the Illinois Central Railroad was to be of no particular benefit to St. Louis. Cairo was to be another great city, and outstrip St. Louis. Now, practically, St. Louis is a principal terminus of that road, and it runs trains in and out to Cairo, Chicago, Dubuque and Sioux City; for such are the laws of trade and the exigencies of human affairs. Gradually, also, and more recently, the great lines of railroad, running westwardly through Canada and from New York, Philadelphia and Baltimore, have been hauling down from the north and stretching directly in straight consolidated lines to the common central terminus at St. Louis. The Chesapeake and Ohio Railroad, by the mouth of the Big Sandy River and Louisville, is fast coming, also; and the Southeastern (St. Louis and Nashville) reaches into Georgia and South Carolina, practically terminating at Charleston;—two new spokes of the wheel. The war times built the grand Central and Union Pacific Railroad, but it had to terminate at Omaha or nowhere and go straight on to Chicago and the East. It was probably not expected to do St. Louis much good; but St. Louis has tapped it at Omaha, and will soon strike it at Fort Kearney, by two or three distinct lines, nearly straight, in continuation of the Missouri Pacific, and the St. Louis, Kansas and Northern Railroads, the great western and northwestern spokes of the wheel, and one hundred and fifty miles at least shorter than from the same point to Chicago (not forgetting the Kansas Pacific Railroad to Denver and Cheyenne); and again, it may be anticipated that the exigencies of trade and commerce will make that road, also, so far tributary to St. Louis as the great central mart may require.

In the meantime, while the incubus of the war is scarcely yet lifted, and many people are but half awake to the coming future, still dozing in the penumbra of the depression period (as if it were to last forever), St. Louis, I observe, has run out several important spokes of the great railroad wheel whereof she is the hub, or they have been run into St. Louis, stretching southeast, southwest,

south, west, northwest, northeast and north—to nearly all points of the compass—and when all are completed that are now in progress or in prospect, at no very distant day, they will present the wondrous spectacle of long lines of railroad radiating from the centre to the circumference, not merely of this valley, but of the whole United States. It is even now made apparent to any one, by a glance at your map, showing the direction of the more prominent lines of railroad, that such another railroad centre as St. Louis is now, or is fast becoming, is not possible on the map of the United States.

So extensive a system of railroads cannot be completed in a day. The wonder is, that so much has been done in the short period since the war. It matters little whether it be the work of St. Louis capital or of foreign capital. Commercially, St. Louis is scarcely one generation old. In the eastern cities are the accumulations of one or two centuries. The capital accumulated here, however large, is all employed in the immediate business of the city. The vast amount required for this rapid construction of long lines of railroad, must come chiefly from abroad. Meantime, it is not surprising that the business men of St. Louis turn their faces to the south and southwest, where they have an almost exclusive monopoly of the trade, rather than to the north and northwest, where they come into more stringent competition with Chicago and the eastern cities. Everything cannot be done at once. At present, the people of the Northwest are left, mainly, to do what they can for themselves to reach St. Louis. They have the rivers and some railroads already, and the important river improvements now in progress will offset to some degree the obstructions of railroad bridges; and more railroads are soon to come.

The Chicago railroads stretch directly westward across the Mississippi to the Missouri River, and some of them are bending southward through Missouri and Kansas, towards Texas and New Mexico. The St. Louis railroads cross them from north round to west, and in the race of competition it comes to the question here, to what extent, and in what kinds of merchandise, either central mart can command the advantage in traffic. Besides the St. Louis, Alton and Chicago, the St. Louis, Jacksonville and Peoria, and Louisiana, Quincy and Burlington, and the St. Louis, Rock Island and Rockford railroads, two other great Northern spokes of the wheel, the St. Louis, Hannibal, Keokuk and Burlington railroad, reaching by Cedar Falls to St. Paul, and by Galesburg to Chicago, and the northern branch of the St. Louis, Kansas and Northern Railroad, reaching by the Central Railroad, of Iowa, to St. Paul and Duluth, not to mention others, are now nearing completion. The Missouri, Kansas and Texas Railroad has no doubt been built in the interest of the North and East; but the practical result, so far, is a terminus at St. Louis. To the extent that it will pay best, it may be expected to remain there. The Atlantic and Pacific Railroad has been constructed so far, probably, with little or no idea of conferring any special benefit upon St. Louis, but rather because the company saw money in the enterprise, and believed it would be a paying institution, even for capitalists of New York and Boston. The Iron Mountain Railroad is more especially a St. Louis road, but it requires the help of foreign capital (which can

be had on good security and at good rates of interest) to extend it into Texas. It reaches now to New Orleans, Mobile, Memphis, and Chattanooga, constituting the great southern spoke of the wheel. The natural competition of Chicago, as it sweeps round southwestwardly, gradually diminishes, and here comes nearly to zero.

Consider, now, what is to be the state of things, particularly with reference to the States lying northwest of the Mississippi River (for in other directions the matter is too obvious to need special comment), when the system of railroads is completed. The distances by railroad will be, in general, shorter to St. Louis than to Chicago. The radiation of railroads will be somewhat analogous to the radiation of rivers, and St. Louis will have both systems in conjunction; for the longer railroads, as naturally as the rivers, and by the same exigencies of trade and commerce, tend to concentration into one common center at the great metropolitan city of the West. Here we come upon matters that lie peculiarly within the knowledge and experience of mercantile men. If I may hazard an opinion, I should say, that there will be in this quarter a divided empire, with field enough for both competitors, and that the division will be much according to kinds of merchandise and the sources whence it comes. Many kinds may reach that region more readily by the great northern water-route and the railroads from Chicago; while many other kinds will be obtained to greater advantage from the St. Louis market; as, for instance, our own manufactures and many importations of European manufactures and products, the heavy groceries from the West Indies and Brazil, and teas and silks from China and Japan. Various articles that are brought from distant parts of the globe in sailing vessels will continue to be imported almost exclusively into the Atlantic cities, where the necessary capital is, and where these vessels are built and owned, and these articles will reach the interior of the northwest more easily by the northern water-route than by railroads across the Alleghanies: they cannot be imported from Europe, I presume, because they cannot pay one duty going into Europe and another duty coming into America from Europe. But manufactures and products of the States of Europe can be imported directly into St. Louis as well as into the Atlantic cities, when regular lines of steamships are established between European ports and New Orleans. The data furnished by experienced men demonstrate that the bulky produce of the country tributary to St. Louis can go from here to Liverpool by the great southern water-route in bulk cheaper than it can possibly be carried across the country by railroad to be exported from the Atlantic cities; and when this route is fully inaugurated (as it doubtless will be before long), it stands to reason that importation to a much larger extent, and of more kinds than has been dreamed of heretofore, will come back the same way to St. Louis, and be distributed from this market even into the Northwest, cheaper than it can be done *via* Chicago; though the war swept American vessels from the ocean. Iron barges, elevators, a St. Philip Canal, improved rivers and steamships and more railroads, will do the business; and St. Louis, to a large and important extent, will become the rival so far, not merely of Chicago, but of New York and

Boston, as an importing and exporting city; so that it may be said, some day, if not now, that St. Louis is the southwestern, and New York the north-eastern focus of the whole ellipse. In this fact lies one principal advantage of the position of St. Louis (if there be any at all) over Chicago as an interior mart for the distribution of general merchandise. Our position in the center of the coal fields and mineral regions of the Valley, and our facilities for various kinds of manufactures, not only of iron and steel, but for queensware, stoneware, tinware, plated ware, glass, zinc, silver, white-lead and oil, refined sugar, tobacco, furniture, agricultural implements, and many other articles, is another great advantage of position. And a still greater is the position of St. Louis at the conjunction of the radiating river and railroad systems, in reference to the bulky agricultural products of the whole vast circuit of country (especially west of the Mississippi), which they penetrate in all directions, comprising within a six hundred-mile circle described on this center nearly the entire area of the most fertile soil of the Mississippi Valley, the garden of America, if not of the whole earth. The importance of St. Louis in this particular lies, first, in its being a central mart for the internal distribution of home products in every direction, and second, in its being a receiving mart for exportation of the surplus. The annual statistics exhibit the present magnitude of this business. The increase in five years in grain, pork and cattle, for instance, is next to fabulous. Within the same period, the swell of the daily clearings, at the St. Louis Clearing House, from half a million a day to four and five millions a day, may be taken as some sure index of the increase in volume of the general commercial operations. The annual statement for the last year shows an aggregate of clearings of 989,000,000, and an increase over the previous year of 133,000,000.

In this view, as in the beginning we glanced backward over a period of thirty years and more, suppose now we look forward through the next thirty years. Considering the rate of progress in that past time (and the rate will surely not be less in the future), let any one try to imagine what will then be the condition of the vast country lying west of the Mississippi River, and for which St. Louis is easily to be the principal commercial mart in this valley. Population has, indeed, reached, scatteringly, nearly to the western limit of the fertile plains where sufficient rains make crops sufficiently certain. It has reached in some places even beyond the limit, where, without railroads or river navigation, it will pay to raise more crops than can be consumed on the ground. Not a tenth part of the intermediate areas is occupied, and scarcely one-half of any one State is under improvement, much less under actual cultivation. These States are much in the condition now, that Illinois, Indiana, Michigan and Wisconsin were, thirty years ago. What will be the amount of products to be exported, or of merchandise to be imported, or manufactures to be supplied, for these States, when they have attained to the present condition of Illinois and Indiana, or Ohio? It surely needs no prophet to foresee that it will require all the navigation that improved rivers and new arts can furnish, and all the railroads that time and money can build, to do it all; and yet

both may have enough to do. There is more now than both can do, and that is the great trouble. The remote Iowa or Nebraska farmer burns corn for fuel, because it costs more than it is worth to carry it to any market. When the rivers are low or frozen up, the railroads put on killing freights in sheer self-defense against the impossible.

It takes time to settle and people and improve a new country like this. I don't know that we should be in any great hurry to get it all done at once. It has, in former times, taken centuries to people a new country, or to build a great city. I am quite sure it is not wise to undertake to build a city in a decade that might very well occupy a century. The growth of St. Louis is certainly rapid and extensive enough to answer all reasonable expectations, if not quite to amaze the most sanguine and impatient. In respect of population, in view of the average rates of increase for each period of ten years from 1840 to 1870, and particularly for the period between 1860 and 1870, during which, the rate was, for the whole period, 15,000 a year, and for the latter half of it, at 21,000 a year, the average rate for the period between 1870 and 1880 can not be expected to be less, and will in all probability be more than 20,000 a year; and this will give a population of more than 500,000 in 1880. Let any one look over the past five years, and consider what has been done in that time, the additions that have been built up, the water-works constructed, the streets and wharves that have been improved, the splendid buildings that have been erected, the manufactures that have been initiated, the packet and barge lines and the elevators, the grain trade that has been created, the flour, pork and cattle trade, the tobacco and cotton trade, the millions invested in iron-works, the railroads that have come into existence and are in progress, the great bridge and tunnel now near to completion, the new Lindell Hotel, the new Post-office, and the new Exchange that are begun, and are to cost millions, and then say if he remembers any period of five years before the war, in which anything like an equal advance was made.

In conclusion and in reference to population in general, I will merely glance at a topic that may not be wholly foreign to your purpose, but is too large to be handled effectually in this place. It is the remarkable fact that the several successive streams of westward migration of the white Aryan race, from the primitive Paradise in the neighborhood of the primeval cities of Sogd and Balkh, in High Asia, long separated in times of migration and for the most part distinct in the European areas finally occupied by them, and which, in the course of its grand march of twenty thousand years or more, has created nearly the whole of the civilization, arts, sciences and literature of this globe, building seats of fixed habitation and great cities, successively, in the rich valleys of the Ganges, the Euphrates, the Nile, the rivers and isles of Greece, the Tiber and the Po, the Danube, the Rhine, the Elbe, and the Seine and Thames, wandering children of the same great family, are now in these later times brought together again in their descendants and representatives, Semitic, Pelasgic, Celtic, Ten-

tonic, and Slavonic, here in the newly discovered continent and common land of promise, and are commingled (especially in this great valley of the Mississippi) into one common brotherhood of race, language, law and liberty.

Yours Respectfully,

St. Louis, Jan. 6, 1873,

N. HOLMES.

ST. LOUIS,

THE

FUTURE GREAT CITY.

HISTORICAL REVIEW OF ST. LOUIS.

In offering to the public an argument to prove that St. Louis is destined to become the great city of the world, it is proper that the discussion of a claim so pretentious be introduced with a brief historical sketch of the foundation, growth and elements of civilization of the city in question.

Such a sketch would enable the interested reader to obtain a limited knowledge of the whole history of St. Louis, from the time of the rude settlement of its founders in the wilderness, among wild beasts and savages, on through frontier struggles, financial evolutions and constantly accumulating wealth, to the city of civilization that she now is.

And if it be true—as I hope to establish, by the plainest and most incontrovertible facts and arguments—that St. Louis is destined to be the great City of the world—the all-directing head and central moving heart, of the accumulated civilization of the great family of man, the facts of her history will, in time, be sought for by citizens and writers, with an eagerness and a zeal never before called out by the interests of any other city—not even of Jerusalem nor of Rome.

The facts and circumstances which foreshadow the destiny of St. Louis—a destiny so important, will not only be of vast moment to the people of the Mississippi Valley, but of this nation, and even interesting to the world.

The biography of cities destined to become great, like that of individuals born to a life of distinction, are always found to be full of interesting incidents foreshadowing their fame and greatness. The life of the one is anala-

gous to the life of the other. And if the exile or the refugee from one land becomes the hero and benefactor of another, the city founded in the wilderness by the pioneer and the missionary, far away from their native homes, is also born to greatness. The eventful experience of the one finds a parallel in the history of the other; therefore, if the curiosity of the mind is excited, and the understanding delighted by reading the biography of the great man, it will, with equal interest, peruse the biography of the great city; since the propriety of narrating the historic career of St. Louis, and especially when the evidence, as will hereafter be presented, is so overwhelming in favor of her future greatness and power.

The spirit of modern civilization is different in its operation and character from the social forces of by-gone eras. It is more catholic in its objects, more active and concentrated in its energy, and has wonderfully abridged the time formerly necessary for historical events to work out their accomplishment. Under the singular velocity it has imparted, the scenes and changes of the human drama are enacted so swiftly that the prophecy of to-day is either authenticated or disproven by the developments of to-morrow. It is this fact which gives us confidence in proclaiming the destiny of St. Louis as we have represented in this book. Already the currents of our civic and political progress are shaping towards its development, and it will not require many years to make it more clearly evident. There are many who now believe in the future of St. Louis as the leading city of the continent and the Capital of the United States, who two years ago looked with incredulity upon such prognostications, and regarded them as mere dreams of ardent minds. The agitation of the question has also spread abroad the fame of our stately and expanding city, and a conviction of the glorious future before her is growing rapidly, not only among our own citizens, but among those disconnected in every way with our municipal interests.

Believing earnestly, as we do, in this future, our object is to foster an intelligent anticipation of it in the public mind; and if our volume assists to accomplish this object, it will not have been written in vain, and the time and labor necessary to group and present the facts and argument it contains will be amply repaid.

We therefore cannot consider our work as complete without some review of the history of St. Louis. The Past often interprets the Future, and is always interesting in connection with it; and, as an appropriate appendix, we present the following historical review, with which is incorporated some valuable and significant statistics illustrating our present social and commercial condition.

GEOGRAPHICAL LOCATION OF ST. LOUIS.

The city of St. Louis, in the State of Missouri, is situated on the west bank

of the Mississippi river, in the county of St. Louis, of which it is the seat of government. It is in

	Deg.	Min.	Sec.
Latitude.....	38	37	37.5
Longitude.....	6	0	45.29

"The site of St. Louis is both commanding and beautiful; high, without being precipitous, and gently undulating, affording easy drainage, and sufficiently level, without being flat, to extend every advantage for building and beautifying purposes.

The plane of the wharf or Front street, is thirty-two feet above low water mark. From thence to Fourth street, the streets rise fifty-nine feet to the first summit, which is a plane occupied by Fourth, Fifth and in part by Sixth streets. From thence in going west and taking the center of the city for observation, the ground gently declines to Thirteenth, when we again commence a gradual ascent to Seventeenth street, where at the intersection of Olive street, we are ninety feet above the wharf. Beyond the city limits the same general characteristics of country are maintained, except that for a distance of some three or four miles beyond, it does not attain to the same elevation as Grand Avenue; but the wave-like character is still preserved, and filled as it all is, with gardens and orchards, it constitutes such a view as is excelled by few of our citizens."

POLITICAL CONDITION OF NORTH AMERICA PRIOR TO THE FOUNDING OF ST. LOUIS.

The 15th of February, 1764, may be accepted as the exact date of the first settlement on the site of St. Louis, and the name of Pierre Liguette Laclede may justly appear in history as the founder of the city.* It is difficult to realize that scarce a century has elapsed since the solitude and silence of the forest primeval reigned over a scene now covered with the countless buildings of a stately city and pulsating with the life of busy thousands. There is, however, no doubt as to the date given, as it is a matter, if not of official record, yet so authenticated by collateral circumstances as to eliminate nearly uncertainty. At the time of the event the political condition (if we may so speak of a vast territory for the most part *terra incognita*) of the North American continent was somewhat confused as to the ownership and boundary. England, France and Spain held nominal possession of vast regions, but with so little certainty of title or jurisdiction that their rival claims would probably have remained an endless source of dispute and conflict had they not been in a measure decided by the treaty of Aix-la-Chapelle in 1748. This treaty, however, embraced no adjustment of boundaries, which was practically impossible at the time, but provided for the restitution of conquests made from

* Notwithstanding the apparently conclusive reasons for believing that the true family name of the founder of St. Louis was Liguette rather than Laclede, we have adopted the latter in this sketch as the more popular and familiar to the majority of readers.

each other by the powers named, and it was not many years after followed by war between France and England. The leading cause of the conflict was the action of the former power in establishing a line of military posts along the lakes and the Ohio and Mississippi rivers, for the purpose of connecting her Canadian possessions with the country bordering the Mississippi river southwardly, over which she also claimed jurisdiction. The bitter and sanguinary hostilities which ensued were terminated by the treaty of Paris, consummated on the 16th of February, 1763, and which closed the celebrated seven years' war on the European continent. The result of this treaty practically left England and Spain the possession of North America. The former retained the Atlantic seaboard colonies and acquired the Canadas and Louisiana, lying east of the Mississippi, except the town of New Orleans and its territory. She also obtained the Floridas from Spain, by restoring to that power Havana and the greater part of the island of Cuba. By a secret treaty of the same date France ceded the country west of the Mississippi, and known by the general designation of Louisiana, to Spain, but of this illimitable territory little if anything was then definitely known.

When we remember the tardy means of communication, at this period, between the Old and New Worlds, it is easy to understand the delay and difficulty in giving any practical effect to the terms of this treaty. It does not appear that Spain exercised any general jurisdiction over the territory acquired until the year 1786, although in the spring of 1764, D'Abadie, the Spanish Governor-General, was instructed to formally promulgate the transfer made under the treaty. The immense territory of Louisiana, the upper portion of which bore the name of "The Illinois," consequently remained under French laws and jurisdiction throughout its scant and widely separated settlements until 1768. The English were more prompt in claiming actual control of the territory ceded by the treaty of 1763, and vigorous measures were taken in various directions to obliterate the evidence of French domination. In the vicinity of St. Louis, east of the Mississippi, Fort de Chartres, one of the military posts established by France along the line of her frontier, was surrendered to Capt. Sterling, of the English army, in 1665, under the treaty of Paris. This fort was situated in the American Bottom, a short distance above Kaskakia, and the French commanding at the time of the surrender, St. Ange de Bellerive, removed with his troops to the west side of the Mississippi, on the 17th of July, 1765, to the settlement of the site of the present city of St. Louis, which had been made about seventeen months before. Without going into the details of English and Spanish occupancy, we will proceed to the history of St. Louis proper.

THE LACLEDE EXPEDITION—ITS OBJECT AND CHARACTER.

Pierre Liguette Laclède has left but faint traces in history prior to the time when his name becomes identified with the founding of St. Louis. He was

born in one of the French provinces bordering on the Pyrenees, and appears to have emigrated to Southern Louisiana with the design of trading with the Indians, bringing with him credentials from the Court of France that secured him the consideration of the authorities. The New World then offered an exciting field for adventurous minds, and many young men crossed the Atlantic to its shores, impelled either by that thirst for gold, which at one time created the dream of an El Dorado beyond the Western Ocean, or the desire to explore the vast continent whose mighty natural features astonished Europe. It is probable Laclède was in part actuated by both these motives, but he was neither a mere gold-hunter, nor a reckless adventurer. Although little is known of his history, except during the period embraced between the years 1763, the year before the founding of St. Louis, and 1778, the year of his death, we can clearly gather the prominent traits of his character. He was brave, self-reliant, and resolute, and his idea of fortune-making in the New World was based on the sober expectation that there was ample opportunity for energy and enterprise in developing the trade in peltries and other articles with the native tribes that roamed over the boundless country of forest and prairie. How long he remained in New Orleans prior to engaging in his famous expedition northward, is not ascertainable, but it appears probable that he was there for a considerable time.

In 1762 D'Abadie, Governor-General, granted to Laclède, in connection with other associates, a charter under the name of "The Louisiana Fur Company," which conferred the exclusive privilege of trading "with the Indians of the Missouri, and those west of the Mississippi above the Missouri, as far north as the River St. Peters." Antoine Maxent and others were interested equally with Laclède in the franchises acquired, but he appears to have been the active and leading spirit of the association. Before entering upon some account of the first expedition organized under the auspices of this chartered company, and which resulted in the founding of St. Louis, it is necessary to glance at the progress made at that time in the settlement and exploration of Upper Louisiana.

The town or city of New Orleans was the capital of the Louisianas, being in fact the only place of any size or importance in the valley of the Mississippi. The immense territory on either side of the great river northward was very imperfectly known, for although partially explored by Marquette, Hennepin, La Salle, Cartier and others, but little accurate information had been gained as to its topography and inhabitants. The great valley, the destiny of which, as the center of our nation's wealth and prosperity, is now so rapidly developing, was then in its primitive condition, with the exception of a few scattered settlements whose people struggled for an existence amid the unfriendly influences of a trying climate and an unsubdued wilderness. Above New Orleans there was a settlement of some consequences in the vicinity of the present city of Natchez, but from that point to Ste. Genevieve

there were but few traces of human occupation. On the eastern side of the Mississippi a few settlements had been formed at Fort de Chartres and vicinity, St. Phillips, Kaskaskia, Cahokia and some other points, but they were comparatively insignificant and had sprung up under the fostering influences of French military protection. The trade in lead, oils and peltries had concentrated at Ste. Genevieve, then a post of some importance, with several small settlements in its vicinity, and which bore the name of Le Poste de Ste. Genevieve. The settlers at the places named were nearly all of that adventurous type of character usually to be found among the pioneers of civilization in a wild continent peopled only by barbaric and nomadic tribes. They included, however, many persons of refinement and education who had come from France or Spain to seek their fortunes in the New World, and were as a body of men consequently different from the more reckless and uncouth pioneers of a later date who had pushed westward the boundaries of the Union against the ineffectual struggles of the Indian tribes.

The only inducement at this period for any persons to penetrate Occidental Louisiana or "The Illinois," was the prospect of trade in furs or minerals, or the love of exploration and adventure, and it is only the daring and resolute who are willing to embark in such pursuits; but notwithstanding this, these pioneers appear to have managed the fierce aborigines with more discretion than their successors, who inaugurated an unextinguishable war.

Such was the condition of the Mississippi Valley as to settlement, at the period indicated. The rule of the red man had been impinged upon, but not broken, and the active and aggressive foreigners had as yet wrought little change upon the face of nature. Notwithstanding the time that had elapsed since De Soto discovered the Mississippi to the South, and Marquette and Joliet to the North, the explorations of the river and its tributaries and the region through which it flowed had not been of an active or exhaustive character, and the development even to the fur trade was insignificant. Beyond the mouth of the Missouri the white man had made little or no progress, and whatever trade was carried on between New Orleans and the country north of the mouth of the Ohio, originated south of the present site of St. Louis.

THE FOUNDING OF ST. LOUIS.

In the summer of 1763, an expedition was organized in New Orleans for the purpose of carrying into operation the powers conferred in the charter granted by Governor D'Abadie to Laclède and his associates. The immediate object in view, was the establishing of a permanent trading-post and settlement on some advantageous place north of the settlements then existing. Laclède was the prominent personage in organizing the expedition, and it left New Orleans under his command on the 3d day of August, 1763. It is impossible to procure accurate information respecting the size and character of the party

participating in the expedition, but it was probably not very numerous, and was composed mainly of hunters and trappers accustomed to the hardships and dangers of such enterprises. The means of transportation were the strong heavily-fashioned boats then in use, in which was stored a large quantity of such merchandise as was necessary for trade with the Indians.

The voyage on the Mississippi was a tedious one, and three months after the departure from New Orleans, or on the 3d of October, the expedition reached Ste. Genevieve. This town, which was founded about 1775, and is perhaps the oldest settlement in Missouri, was then a place of some consequence, and the only French post on the west bank of the river. The intention of Laclède was to seek a place further north, and after a short stop at Ste. Genevieve, the party continued their course, their destination now being Fort de Chartres, to which place Laclède had an invitation from the military commander, and where he determined to rest and store his goods while exploring the country for a suitable location for the proposed trading post. At the time of the arrival of the expedition the fort was commanded by M. de Neyon de Villiers, who, although of a haughty disposition, appears to have welcomed the party with kindness and hospitality. The energetic spirit of Laclède did not permit him to remain inactive for any length of time, while the object of the expedition was unaccomplished, and a few weeks after his arrival at Fort de Chartres, he started with a portion of the party towards the mouth of the Missouri. Among those who accompanied him were two brothers, Pierre and Auguste Choteau, whose family name is thoroughly identified with the history of St. Louis. The prospecting party started in the beginning of February, 1764, and they went as far as the mouth of the Missouri, but without fixing upon a site for the post. On their return along the western shore, Laclède landed at the sweeping curve of the river on which now stands the city of St. Louis, and impressed by its pleasant aspect of woodland and prairie swelling westward from the river, he determined to establish here the settlement and post he desired. This memorable event occurred on the 15th of February, 1764, and Laclède having selected the site, immediately proceeded to clear away trees and mark out the lines of a town, which he named St. Louis in honor of Louis XV of France, evidently ignorant at the time that this monarch had transferred to Spain the whole country west of the Mississippi.

When Laclède and his men selected their trading station, the marvels of its future development were undreamed of. Around them lay a limitless and untrodden wilderness, peopled only by tribes of savage and unfriendly Indians, and in which subsistence could only be obtained by the chase. It is only when we thus contemplate our ancestors struggling with unconquerable energy and daring, amid innumerable dangers and hardships, that we properly estimate their worth and character. It is only then that we realize that the natural advantages of the location chosen, formed only one element in the colossal result of their work. The others are to be found in those motives and heroic qualities which give stability and nobleness to human actions. It is pleasant and inspiring to see in the historical perspective of our city samples

of frugality, fortitude and self-reliance, for these are the only foundations for a community upon which prosperity can be immutably erected.

SUCCEEDING HISTORICAL EVENTS.

Laclede's party had been increased somewhat in numbers by volunteers from Ste. Genevieve, Fort de Chartres and Cahokia, then called "Notre Dames des Kahokias," but still numerically it was but a small band, and could have made no sustained resistance to Indians had they disputed their right to settlement. It does not appear, however, that the pioneers encountered any hostility from the natives. Not long after their arrival a large body of Missouri Indians visited the vicinity, but without unfriendly intent. They did not belong to the more warlike tribes, and being in an impoverished condition all they wanted was provisions and other necessaries. The settlers were in no condition to support their visitors, but as they were equally unprepared to provoke their hostility, their arrival caused no small uneasiness, and it is said a few of Laclede's party apprehending trouble, re-crossed the river and returned to Fort de Chartres or Cahokia. By judicious management and by announcing the anticipated arrival of French troops from the fort, Laclede finally succeeded in inducing the Indians to depart, very much to the satisfaction of his people. After some progress had been made in the actual establishment of a settlement, Laclede returned to Fort de Chartres to make arrangements for the removal to St. Louis of the goods left there, as it was expected that the fort would soon be surrendered to the English. During the ensuing year this event took place as before stated, and Louis St. Ange de Bellerive, the French commander, removed, with his officers and troops, numbering about fifty men, to St. Louis, on the 17th of July, 1765; and from this date the new settlement was considered the capital of Upper Louisiana. At this time M. Aubrey was Commandant-General at New Orleans, M. D'Abadie having died during the preceding year, as stated in Marbois' History of Louisiana, from the effects of grief at the transfer to Spain of the French possessions.

St. Ange, on arriving at St. Louis, at once assumed supreme control of affairs, contrary to the treaty of Paris. There was indeed no person who could have conferred upon him this authority, but there was none to dispute it. Nearly all of the settlers of St. Louis and other posts in the valley of the Mississippi were of French nationality or accustomed to the rule of France. In Lower Louisiana the promulgation of the terms of the treaty was received with intense dissatisfaction, which was also the case at St. Louis when the intelligence was subsequently announced there. The authority of Spain could not at this time be practically enforced, and the inhabitants of St. Louis not only submitted to the authority of St. Ange, but appear to have welcomed his arrival with satisfaction. He proved a mild and politic Governor, fostering the growth and development of the new settlement and ingratiating himself with the people. He maintained friendly relations with the Indians, and was instrumental in inducing Pontiac, the famous chief of the Ottawas, to abandon his fierce crusade against the English. Between Laclede and St. Ange the most

friendly relations existed. An important act of the latter was the formal issuing of land grants to citizens of St. Louis, the recording of which in the "Livre Terrien" conferred titles to land granted them by the former, and formed the basis of a simple land system.

ST. LOUIS IN EARLY DAYS.

The extent of the town in its early days, if it did not form some faint prophecy of future development, still clearly proves that more than a mere trading post was intended by the founders. The principal street (La Rue Principale) ran along the line of Main street of to-day, extending from about Almond to Morgan street. The next west was about the same length, and corresponded to the present Second street, and, after the erection of a church in the vicinity of the present site of the Catholic Cathedral, received the name of Church street (La Rue de l'Eglise.) The next street, now Third, was originally known as Barn street, from the number of buildings on it of the character indicated. In mentioning these streets, however, we speak of a time many years subsequent to the arrival of Laclède. Before the topographical features of the present site of our city were altered by the course of improvements, they were materially different from the present. Most of our citizens will find it hard to realize that originally a rocky bluff extended on the river front from about Walnut to Vine street, with a precipitous descent in many places. As building progressed this bluff was cut away, and the appearance of a sharp but tolerably even incline to the river from Main street was gained. At the corner of Commercial alley and Chestnut street and at several other places there are at present palpable evidences of this rocky ridge, portions of it yet remaining. At first it is probable the Laclède settlement bore the appearance of a rude and scattered hamlet in the wilderness, and it required the growth of several years before the semblance of streets was formed by even imperfect lines of buildings of the most primitive character. Immediately west of the bluff mentioned was a nearly level strip of land protected by gentle elevations westward, and here was the site of the Laclède settlement. The river front was covered with a growth of timber, in the rear of which was a large and gentle rolling prairie with scattered groves of heavy forest trees, which received the title of "Le Grande Prairie," and it is not difficult to believe that if the selection of the spot was not made because of its adaptability as the site of a great city, it was because of its natural pleasantness and beauty.

THE YEARS OF SPANISH CONTROL.

In 1766 an effort was made by Spain to assume control of the territory ceded to her by the treaty of Paris, and General Don Antonio D'Ulloa arrived at New Orleans, with Spanish troops, but owing to the hostile feeling of the inhabitants he finally departed without attempting to exercise the powers of Governor. The rule of France was maintained in Lower Louisiana until the arrival of Count O'Reilly in 1769, who took possession of the Territory and

New Orleans, obliterating forcibly French supremacy and strengthening his authority by severe measures towards the more active adherents of France.

The scattered settlements of Upper Louisiana, although equally opposed to Spanish authority, had no adequate means of resistance; and when Rios, a Spanish officer, arrived at St. Louis, with a small body of troops, on the 11th of August, 1768, he only encountered a passive hostility. He took possession of the country in the name of his Catholic Majesty, but does not appear to have exercised any civil authority, as the archives show that St. Ange acted as Governor until the beginning of 1770. On the 17th of July, 1769, Rios and his troops departed and returned to New Orleans to co-operate with Count O'Reilly in enforcing Spanish authority in the lower Province.

During the same year Pontiac, the Ottawa chief, arrived at St. Louis for the purpose of visiting his former friend, St. Ange de Bellerive, by whom he was cordially received. The visit was fatal to the Indian warrior, for, while on an excursion to the English territory on the other side of the river, he was killed by a Kaskaskia Indian.

In the latter part of 1770, Count O'Reilly having acquired full control of Lower Louisiana, determined to bring the upper province into equal subjection. He appointed Don Pedro Piernas as Lieutenant-Governor and Military Commandant of the province, and dispatched him with troops to St. Louis, where he arrived on November 29th of the same year. He did not enter on the exercise of executive functions until the beginning of the following year, but the delay was not occasioned by any active hostility on the part of the people. From this event we may date the commencement of Spanish domination in Upper Louisiana.

The new Governor, fortunately, proved an excellent administrative officer; and as his measures were mild and judicious, he soon conciliated the people. He made no abrupt changes in the laws, and improved the tenure of property by ordering accurate surveys and determining the lines of the land grants previously made. Under the liberal policy of the Spanish Governor, St. Louis prospered rapidly, while immigration constantly added to the population. In 1774 St. Ange de Bellerive, who had accepted military service under Piernas, died, and was buried in the Catholic cemetery with every mark of public esteem and respect. In his will he commended his soul "to God, the blessed Virgin, and the Saints of the Celestial Court," and appointed Laclede his executor.

Emigration from the Canadas and the lower Province increased rapidly under the benignant policy of Spain, and settlements sprang up at different points along the Mississippi and Missouri rivers, some of which, however, date from a few years earlier. In 1767 Carondelet was founded by Delor de Tregette, and appears at first to have been known as Louisburgh, and at a different period as *Vide Poche*, but finally received its present name in honor of the Baron de Carondelet. In 1769 Les Petites Cotes, subsequently St. Andrews, and now St. Charles, was founded by Blanchette Chasseur. The first settlement at Florissant, afterwards called St. Ferdinand, was made by

Beausier Dunegant in 1776; and so the career of growth and prosperity was inaugurated in this portion of the Mississippi Valley.

The successor of Piernas was Don Francisco Cruzat, who assumed office in 1775, and was succeeded by Don Fernando de Leyba in 1778. It was during the administration of the latter that the death of Laclède took place, while on his way to New Orleans, at the age of fifty-four. He was buried near the mouth of the Arkansas river, June 20, 1778, amid the wild solitude of a region in which he had acted as the pioneer of civilization.

The war which was now raging between Great Britain and her American colonies could hardly be unfelt on the far western shores of the Mississippi. Many of the inhabitants of St. Louis, and other places on the same side of the river, were persons who had changed their residence from the opposite shore when it passed under English rule. They were influenced by a hereditary hostility to that power; and although enjoying a mild government under Spanish rulers, their independent spirit, apart even from their feeling towards England, enlisted their sympathies in behalf of their colonial brethren in the East, struggling for freedom. Their great distance did not secure their prosperity from the disastrous influences of war. It was known that Spain sympathized with the colonies, and this speedily endangered their security; for the ferocity of many of the Indian tribes was directed against them by the English.

In the early part of 1779 Col. Rogers Clark, under the authority of Virginia, visited the settlements of Cahokia, Kaskaskia, and other places, for the purpose of endeavoring to enlist men for an expedition against St. Vincents, now Vincennes, then held by the English under Governor Hamilton.

THE ATTACK ON ST. LOUIS BY INDIANS.

About this time an alarming rumor became prevalent that an attack on St. Louis was being organized under British influence. Actuated by a spirit of generous chivalry, Clark offered the assistance of himself and men to Lieut. Gov. Leyba for the protection of the town, but his offer was declined on the ground that the danger was not imminent. (There seems to be some uncertainty as to this incident, but it is supported by the excellent authority of Judge Wilson Prim, and is corroborated by Stoddard in his historical sketch of Louisiana.) Whatever was the ground of the fancied security, the sequel proves either that he was an execrable traitor or shamefully incompetent to meet the exigencies of the time. Apprehensions, however, began to disturb the people, and the defenseless condition of the town induced them to undertake some means of fortification. Although they numbered little more than one hundred men, they proceeded to build a wall of logs and earth about five or six feet high, inclosing the dwellings of the settlement. It formed a semi-circular line, with its ends terminating at the river, and supplied with three gates, at each of which a heavy piece of ordnance was placed and kept in constant readiness. For some months after this work was completed, nothing occurred to indicate an Indian attack. Winter passed away, and the inhabitants finally began to consider their apprehensions groundless, which conclusion

was assisted by the assurances of the Governor that there was no cause for anxiety. In reality, however, the long pending attack was now being secretly organized. Numerous bands of Indians, composed of Ojibways, Winnebagos, Sioux, and other tribes, with some Canadians, numbering in all nearly 1500, had gathered on the eastern shore of the river, a little above St. Louis, and arrangements were consummated for a general attack on the settlement on the 26th of May.

The 25th of May, 1780, was the festival of Corpus Christi, which was celebrated by the Catholic inhabitants with religious ceremonies and rejoicing. There was no feeling of apprehension abroad just at this time, notwithstanding that an event calculated to arouse alarm had occurred but a few days before. An old citizen named Quenelle had crossed the river to Cahokia creek on a fishing excursion. While watching his lines he was startled to see on the opposite shore of the creek a man named Ducharme, who had formerly lived in St. Louis and who had fled to escape punishment for some crime committed. He endeavored to induce Quenelle to come over to him, but the latter thought he detected the presence of Indians in the bushes opposite, and refused, returning hastily in his canoe to the town, where he reported what had occurred. The Commandant ridiculed his story, and it did not create any general fear among the inhabitants. Corpus Christi was celebrated with unusual animation, and a large number of the citizens left the inclosure of the town and were scattered about the prairie—men, women and children—gathering strawberries. A portion of the Indians crossed the river on the same day, but fortunately did not make the attack, owing, probably, to their not knowing how many of the men had remained in the town. Had they done so, the result would surely have been fatal to the young settlement. On the following day, the whole body of the attacking force crossed, directing their course to the fields over which they had seen the inhabitants scattered the day before. It fortunately happened that only a few of them were outside the town, and these, seeing the approach of the Indians, hastily retreated towards the upper gate, which course led them nearly through a portion of the hostile force. Rapid volleys were fired at the fleeing citizens, and the reports speedily spread the alarm in the town. Arms were hastily seized, and the men rushed bravely towards the wall, opening the gate to their defenseless comrades. There was a body of militia in the town from Ste. Genevieve, which had been sent up, under the command of Silvia Francisco Cartabona, some time before, when apprehensions of an attack prevailed. This company, however, behaved shamefully, and did not participate in the defense, many of them concealing themselves in the houses while the fight was in progress. The Indians approached the line of defense rapidly, and when at a short distance, opened an irregular fire, to which the inhabitants responded with light arms and discharges of grape-shot from their pieces of artillery. The resistance made was energetic and resolute, and the savage assailants seeing the strength of the fortifications and dismayed by the artillery, to which they were unaccustomed, finally retired, and the fight came to a close.

Commandant Leyba appeared upon the scene at this juncture, having been

started from a carouse to some idea of the situation by the sound of the artillery. His conduct was extraordinary; he immediately ordered several pieces of ordnance, which had been placed near the Government house, to be *spiked*, and was then, as it is chronicled, rolled to the immediate scene of action "*in a wheelbarrow.*" He ordered the inhabitants to cease firing and return to their houses. Those stationed near the lower gate, not hearing the command, paid no attention to it, and he directed a cannon to be fired at them. This barbarous order was carried out, and the citizens only escaped the volley of grape by throwing themselves on the ground, and the shot struck down a portion of the wall. The unparalleled treachery of the Commandant was fortunately exhibited too late to be of assistance to the Indians, who had been beaten back by the determined valor of the settlers, and the attack was not renewed. When they had left the vicinity, search was made for the bodies of the citizens who had been killed on the prairie, and between twenty and thirty lives were ascertained to have been lost. Several old men, women and children were among the victims, and all the bodies had been horribly mutilated by their murderers.

The traitorous conduct of the Commandant, which so nearly imperiled the existence of the town, had been obvious to the people generally; and justly indignant at his cruel rascality, means were at once taken to transmit a full report of his proceedings to Galvez, then Governor of Lower Louisiana. This resulted in the prompt removal of Leyba, and the settlement was again placed under the authority of Cruzat. Leyba died the same year from the effects, it is said, of poison administered by his own hand; universal obloquy and reproach having rendered his life unendurable. He was buried in the village church, "in front of the right-hand balustrade, having received all the sacraments of our mother the Holy Church," as is set forth in the burial certificate of Father Bernard, a "Catholic Priest, Apostolic Missionary Curate of St. Louis, country of Illinois, Province of Louisiana, Bishopric of Cuba." The year 1780, rendered so memorable by this Indian attack, was afterwards known as "*L'anne du grande coup,*" or "year of the great blow."

There is no doubt but this assault on St. Louis had for its object the destruction of the settlement, and was only frustrated by the gallantry of the people, that it was partially instigated by English influence, is almost unquestionable. The Indians accepted their defeat and departed without attempting any other demonstration. It is said their retreat was occasioned by the appearance of Col. George Rogers Clark with four or five hundred Americans from Kaskaskia, but this is not substantiated. Pending the arrival of Cruzat, Cartabona, before mentioned, exercised the functions of Lieutenant-Governor, but, however, for only a short period. One of the first works undertaken by Cruzat was the strengthening of the fortifications; he established half a dozen or more stone forts, nearly circular in shape, about fifty feet in diameter and twenty feet high, connected by a stout stockade of posts. The fortifications, as extended and improved by Cruzat, were quite pretentious for so small a settlement. On the river bank, near the spot formerly occupied by the Floating Docks, was a stone tower, called the "Half

Moon," from its shape, and westwardly of it, near the present intersection of Broadway and Cherry street, was erected a square building called "The Bastion;" south of this, on the line of Olive street, a circular stone fort was situated. A similar building was built on Walnut street, intended for service both as a fort and prison. There was also a fort near Mill Creek; and east of this another circular fort near the river. The strong stockade of cedar posts connecting these forts was pierced with loop-holes for small arms. The well-devised line of defenses was not subjected to the test of another Indian attack, for although during the continuance of the Revolutionary war other settlements on the Mississippi and Missouri rivers had to contend against the savages, St. Louis was not again molested.

From this period the progress of St. Louis was slow but satisfactory under the liberal and judicious policy of the Spanish Governors, and it will be sufficient to note only the more important events.

EARLY NAVIGATION OF THE MISSISSIPPI.

It is difficult to realize in these days the perils and delays incident to the early navigation of the Mississippi. It is to us now the unobstructed and natural highway of commerce and travel, connecting the West and far North with the warm and fruitful South, and bearing to the ocean the various products of rich and populous regions. A hundred years ago it was no less majestic in its strength and beauty, but its ministrations to the needs of civilized humanity had hardly begun; it rolled its splendid flood through a wild and solitary wilderness, and the sounds of the winds in the forest mingled with the monotone of flowing waters in a murmurous rhythm that sunk or swelled only with the fluctuations of nature. There were no towns along its banks, no rushing steamboats on its surface; and rarely only Indian canoes formed a transitory feature in its landscapes and the shouts of savage voices were heard. With the birth of white settlements in the great Valley the solitude of the Father of Waters was gradually invaded. In their rude craft the early voyageurs had to struggle hard against the swift current, and a voyage from New Orleans to St. Louis was then a thing of months, not of days, and required nearly as much preparation as one across the Atlantic. During Cruzat's second administration navigation was much impeded and disturbed by piratical bands which harbored at certain points on the woody shores and instituted a system of depredations on settlers or others passing up and down the river. These bands were principally controlled by two men named Culbert and Magilbray, who had a permanent rendezvous at a place called Cotton Wood Creek. The usual programme of the pirates was to attack the vessels of voyageurs at some place where a surprise could be readily effected, and having compelled the affrighted crews to seek safety on shore or by surrender, they would plunder the boats and the persons of prisoners of all valuables. The vicinity of Grand Tower, a lofty rock situated about half way between St. Louis and the mouth of the Ohio, became a dreaded spot also through the deeds of these river marauders, and many tales exist in the memories of old citizens of acts of

violence perpetrated near these places. Early in the year 1787 an event occurred which inaugurated severe measures by the government against the pirates, resulting in their dispersion. M. Beausoliel, a New Orleans merchant, started from New Orleans for St. Louis with a barge richly freighted with merchandise. A strong breeze prevailed as this vessel was approaching Cotton Wood Creek. The pirates were in waiting to make an attack, but were frustrated by the swift progress of the vessel, and they dispatched a body of men up the river for the purpose of heading off the expected prize. The point chosen for the attack was an island, since called Beausoliel's Island, and was reached in about two days. The barge had put ashore and was easily captured and the crew disarmed, when the captors turned her course down the river. On the way down an unexpected deliverance was effected through the daring of a negro named Casotte, who, by pretending joy at the capture of the vessel, was left free and employed as a cook. He maintained a secret understanding with Beausoliel and some of his men, and at a given signal the party effected a sudden rising. They defeated the pirates after a brief struggle, who were all either killed or captured. Beausoliel deemed it prudent after this alarming experience to return to New Orleans, and in passing Cotton Wood Creek kept as near the opposite shore as possible. On reaching New Orleans a full report of the doings of the pirates and the capture and deliverance of the barge was made public, and convinced the authorities and the people that strong measures were absolutely necessary to terminate these perils to life and property on the river. The Governor issued an order that all boats bound for St. Louis the following spring should make the voyage together, thus insuring mutual protection. This was carried out and a little fleet of ten boats started up the river. On approaching Cotton Wood Creek, some of the men in the foremost boat perceived some persons on shore near the mouth of the creek. A consultation was held with the crews and passengers of the other boats, and it was determined that while a sufficient number of men should remain to protect the boats the remainder would form a party to attack the robbers in their haunt. On reaching the place the courageous voyageurs found that their enemies had disappeared, but four boats were discovered in a bend of the creek, laden with a miscellaneous assortment of valuable plunder, and in a low hut, situated among the trees at a little distance from the bank, a large quantity of provisions and ammunition was found, with cases of guns and various other weapons, indicating the numerous captures which had been made by these outlaws. All of this property was removed, together with the boats and contents and carried to St. Louis, where a large number of the articles were identified by the owners.

The arrival of the fleet of barges created quite a commotion in the settlement, and was considered so memorable that the year 1788 received the name of "*L'annee des Dix Bateaux*," or "the year of the ten boats." A most fortunate result of this descent was that although no blood was shed it practically led to the dispersion of the bands, and but few subsequent depredations are reported to have occurred.

Prior to the event just narrated and in the year 1785, the people of St.

Louis experienced a serious alarm and loss of property, owing to a sudden and extraordinary rise in the Mississippi river. The American Bottom was covered with water, and Cahokia and Kaskaskia were threatened with being swept out of existence. Most of the buildings in St. Louis were situated on Main street, and the rise of the waters above the steep banks spread general dismay. The flood subsided, however, nearly as rapidly as it had risen, averting the necessity of abandoning the houses, which had been commenced. The year received the name of "*L'annee des Grandes Eaux*," or "the year of the great waters." No rise in the river equal to this has occurred since, excepting in 1844 and 1851, which floods are remembered by most of our citizens.

CONCLUDING EVENTS UNDER THE SPANISH DOMINATION.

In the year 1788, the administration of Don Francisco Cruzat terminated, and Manuel Perez became Commandant-General of the West Illinois country at the post of St. Louis. At this time the population of this and the neighboring settlements numbered nearly 1200 persons, while that of Ste. Genevieve was about 800. The administration of Perez was prosperous, and like his predecessor he was generally esteemed by the inhabitants. He brought about a settlement of friendly Indians in the vicinity of Cape Girardeau, where he gave them a large grant of land. They consisted of Shawnees and Delawares, two of the most powerful tribes east of the Mississippi river, and the object was to oppose through them the Osage Indians, a strong Missouri tribe who were constantly making incursions on the young settlements. This scheme is said to have operated satisfactorily.

In 1793, Perez was succeeded by Zenon Trudeau, who also became popular, and instituted various measures for the encouragement of immigration. In the year 1792, the honey-bee is chronicled to have first appeared, following as it were, civilization from the East, and its coming was hailed with delight. The grave difficulties which had sprung up between the American Colonies and Spain, respecting territorial boundaries and the navigation of the Mississippi, were adjusted by treaty in October, 1795, but more serious trouble subsequently arose from the same cause.

During the administration of Trudeau, St. Louis and the other settlements in that portion of the country expanded rapidly. Under the influence of the exceedingly favorable terms offered to settlers, and the fact that the fear of Indian attacks was greatly diminished, quite a number of citizens of the United States left the country east of the Mississippi, over which English control was now practically broken up, and took up their residence in the Spanish dominions. St. Louis improved in appearance, and new and neat buildings began to supplant, in many places, the rude log huts of earlier years. Trade received a new impetus, but the clearing of the country in its vicinity and the development of agriculture still made but slow progress. The dealing in peltries was the principal business, and in their effort to expand their exchanges with Indian tribes, traders became more energetic and daring in their excursions and traveled long distances into the interior westward, and

forced their rude boats up the swift Missouri to many points never before visited.

Trudeau closed his official career in 1798, and was succeeded by Charles Dehault Delassus de Delusiere, a Frenchman by birth, but who had been many years in the service of Spain. The winter of the succeeding year was one of extraordinary severity and received the title of "*L'annee du Grande-hiver*" or "year of the hard winter." The same year that Delassus commenced his administration was signalized by the arrival of some galleys with Spanish troops under Don Carlos Howard, and was called "*L'annee des galeres*," or "year of the galleys." This Governor caused a census to be taken of Upper Louisiana settlements, from which we extract the following, showing the population of the places named in the year 1799: St. Louis, 925; Carondelet, 184; St. Charles, 875; St. Ferdinand, 276; Marius des Liard, 376; Meramee, 115; St. Andrew, 393; Ste. Genevieve, 949; New Bourbon, 560; Cape Girardeau, 521; New Madrid, 782; Little Meadows, 72. Total, 6,028. Total number of whites, 4,948; free colored, 197; slaves, 883.

It will be seen from these figures that St. Charles then nearly equalled St. Louis in population, while Ste. Genevieve exceeded it; and if any then living ever dreamed of one of these settlements becoming the centre and seat of Western empire, the prophecy would probably have been in favor of the brisk town at the mouth of the Missouri.

On the 15th of May, 1801, the small pox broke out in St. Louis and vicinity with fearful severity. It was a new malady among the healthy settlers, and as was usual, when particularly impressed by an event, they commemorated the year by a peculiar title, calling it "*L'annee de la Picotte*," the "year of the small-pox." About this time the increase in immigration created a furore for speculation in land, and some immense grants were obtained.

THE RETROCESSION OF LOUISIANA TO FRANCE AND ITS PURCHASE BY THE UNITED STATES.

On the 1st of October, 1800, the treaty of Ildefonso was consummated, by which Spain, under certain conditions, retroceded to France the territory of Louisiana; and in July, 1802, the Spanish authorities were directed to deliver possession to the French commissioners. This event, however, did not take place until the month of December, 1803, when M. Laussat on behalf of France was placed in control. The supremacy of England on the high seas at this period practically prevented France from instituting any possessory acts by transferring troops of the newly-acquired territory, and she wisely resolved to accept the offer of the United States and sell the vast territory to that government. This famous purchase, accomplished during the administration of President Jefferson, was formally concluded on the 30th of April, 1803; and in December following, M. Laussat, who had just received control of the Province from the Spanish authorities, transferred it to the United States, represented at New Orleans for that purpose by Governor Claiborne and General Wilkinson, the commissioners appointed. The sum of money paid

by the United States for the territory acquired was about \$15,000,000. The agent of France for receiving possession of Upper Louisiana from the Spanish authorities was Amos Stoddard, a captain of artillery in the service of the United States. He arrived in St. Louis in March, 1804, and on the 9th of that month Charles Dehault Delassus, the Spanish Commandant, placed him in possession of the territory, and on the following day he transferred it to the United States. This memorable event created a wide-spread sensation in St. Louis and the other young towns in the vicinity. Most of the people were deeply attached to the old government, and although they were in sympathy with the vigorous Republic which had sprung into existence in the East, and dimly appreciated the promise of its future, yet it was with feelings of regret and apprehension that they saw the banner of the new government unfurled in place of the well-known flag of Spain. There were, however, many among St. Louis citizens who rejoiced at the transfer, and their anticipations of its prosperous influence on their town were speedily realized, for business generally became more animated, while the population rapidly increased by an energetic and ingenious class of settlers from the East and other points, mostly representatives of the Anglo-Saxon race, always the most successful in urging forward the prosperity and development of a country.

The date of this transfer marks an interesting epoch in the growth of St. Louis and the Western country. If, as we believe, before the year 1900 St. Louis will be the leading city of the North America Continent, her history will form a marvelous chapter in the chronicles of the life and development of modern nations. Nearly within the bounds of a century a rude settlement in a far inland wilderness will have expanded into a mighty metropolis, the rich capital and throbbing heart of the greatest nation in the world, the center of modern civilization, knowledge and arts; a city of vast manufacturing and commercial interests, in which every branch of human industry is represented; a second Babylon, on the banks of a river beside which the Euphrates was a streamlet; with iron roadways for the cars of steam branching out in all directions, and whose empire extends from the wild billows of the Atlantic to the calmer waters of the Pacific, from the cold lakes of the North to the warm waters of the Mexican Gulf. Here indeed is a historical picture which words can scarcely depict, which illustrates the power of human activities far more wonderously than the colossal but isolated structures of the people of the olden time.

ST. LOUIS UNDER THE RULE OF THE UNITED STATES.

A temporary government for St. Louis and Upper Louisiana was promptly provided for by Congress, Captain Stoddard being appointed to exercise the functions and prerogatives formerly vested in the Spanish Lieutenant-Governor. In the excellent historical sketch of Louisiana written by that officer, some interesting particulars are given of St. Louis at the time of the transfer to the United States. The town consisted of about 180 houses, and the population in the district numbered about 2,280 whites and about 500 blacks. The

total population of Upper Louisiana is stated at 9,020 whites and 1,320 blacks. Three-fifths of the population of Upper Louisiana were Anglo-Americans. According to the same authority, St. Louis then consisted of two long streets running parallel to the river, with a number of others intersecting them at right angles. There were some houses, however, on the line of the present Third street, which was known as "*La rue des Granges*," or the street of barns, as before mentioned. The church building, from which Second street then derived its name, was a structure of hewn logs somewhat rude and primitive in appearance. West of Fourth street there was little else but woods and commons, and the Planters' House now stands upon a portion of the space then used for pasturage purposes. There was no post-office, nor indeed any need for one, as there were no official mails. Government boats ran occasionally between New Orleans and St. Louis, but there was no regular communication. The principal buildings were the Government house on Main street near Walnut streets. The means of education were of course limited in character, and as peltries and lead continued to be the chief articles of export, the cultivation of the land in the vicinity of the town progressed but slowly. There is a tradition that St. Louis received the *sobriquet* of *Plain Court* (short bread), owing to the scarcity of the staff of life in the town. Indeed there appears reason to believe that, in a commercial point of view, Ste. Genevieve at this time was a much more important place than St. Louis.

Captain Stoddard, on assuming control, published a circular address to the inhabitants, in which he formally announced that Louisiana had been transferred to the possession of the United States, and that the plan of a permanent territorial government was under the consideration of Congress. He briefly alluded to preceding events as follows: "It will not be necessary to advert to the various preliminary arrangements which have conspired to place you in your present political situation. With these it is presumed you are already acquainted. Suffice it to observe that Spain, in 1800 and 1801, retroceded the colony and province of Louisiana to France, and that France, in 1803, conveyed the same territory to the United States, who are now in the legal and peaceful possession of it. These transfers were made with honorable views and under such forms and sanctions as are usually practiced among civilized nations." The remainder of the address is devoted to an eloquent exposition of the new political condition of the people and of the privileges and benefits of a liberal republican government.

The fur trade, which had led to the founding of St. Louis, continued for many years to be the principal business of the people. Here, as elsewhere, the Indian tribes forged the weapons for their own destruction. They eagerly sought the opportunity to exchange with the white men the fruits of the chase for the articles and commodities of a higher civilization. They were the principal agents in developing the fur trade of the North and West, and by so doing hastened the incoming of the indomitable race destined to build, over their slaughter and decay, the glorious structure of American liberty. These primitive races wasted and faded with the birth of a nation, whose evangel was to bless and metamorphose the New World; and even had there been no

Revolutionary war to usher in the American Union, there is enough in the fate of the aborigines of the country to authenticate the remark of Theodore Parker that "all the great charters of humanity have been written in blood."

During the fifteen years ending in 1804 the average annual value of the furs collected at St. Louis is stated to have been \$203,750. The number of buffalo skins was only 850; deer, 158,000; beaver, 36,900 pounds; otter, 8,000; bear, 5,100. A very different state of things existed twenty or thirty years later, when beaver were nearly exhausted and buffalo skins formed the most important article of trade. The commerce consisted principally of that portion of furs that did not find its way directly to Montreal and Quebec through the lakes.

The supplies of the town, especially of groceries, were brought from New Orleans, and the time necessary for a trip was from four to six months. The departure of a boat was an important event, and generally, many of the inhabitants collected together on the shore to see it off and bid good-bye to the friends who might be among the passengers. Wm. C. Carr, who arrived about the 1st of April, 1804, states that it took him *twenty-five days* to make the trip from Louisville, Ky., by river. On the same authority it is stated that there were only two American families in the place—those of Calvin Adams and William Sullivan. Mr. Carr remained in St. Louis about a month, and then, attracted by the greater lead trade of Ste. Genevieve, went to that place to reside, but returned in about a year, convinced that St. Louis was a better location. In the same year, Col. Rufus Easton, John Scott and Edward Hempstead came to reside in the country. Mr. Scott settled at Ste. Genevieve; Mr. Hempstead went to St. Charles, then called Petite Cote, where he remained for several years, and then came to St. Louis; Mr. Easton remained in St. Louis.

In 1802, James Pursley, an American, with two companions, started on a hunting expedition from St. Louis to the source of the Osage, but extended his course westward. After various dangers and adventures he reached the vicinity of Santa Fe, and is said to have been the first American who traversed the great plains between the United States and New Mexico.

In 1804 the United States dispatched Lewis and Clark and Major Pike to explore the sources of the Mississippi, the Arkansas, the Kansas, and the Platte rivers. Hunters from St. Louis and vicinity formed their companions, or preceded them, and were to be found on nearly all the rivers east of the Rocky Mountains. Mr. Auguste Chouteau, about the same time, had outfitted Loisel, who established a considerable fort and trading post on Cedar Island, a little above the Big Bend of the Mississippi; so that about the time that St. Louis became a town of the United States, the great regions west and north of her were being gradually opened to settlement. Forty years had elapsed since Laeclède had founded the settlement, and yet, compared with the development of subsequent times, its growth had not been very rapid. It was but a straggling river village with few buildings of any consequence, and was cut off from the world of trade and civilization by its great distance from the seaboard and the vast unpeopled country surrounding it. The inhabitants were

mostly French, and the social intercourse was simple and friendly, with but faint traces of class distinctions. There was only one resident physician, Dr. Saugrain, who lived on Second street, and one baker, Le Clere, who baked for the garrison and lived on Main street near Elm. The only American tavern was kept by a man named Adams, and this, with two others kept by Frenchmen named Yostic and Laudreville, both on Main street near Locust, were, we believe, the only establishments of the kind in the town. The names of the more prominent merchants and citizens at this time are familiar at present to nearly all of our citizens, owing to many of the families still being represented, and the fact that their names, most appropriately, have been wrought in with the nomenclature of our streets. Among them we may mention Auguste and Pierre Chouteau, Labadie, Sarpy, Gratiot, Pratte, Tayon, Lecompt, Papin, Cabanne, Lebaume, Soulard, Hortez, Alvarez, Clamorgan, Debreuil and Manuel Lisa. The Chouteaus lived on Main street, and Pierre, whose place was near the present intersection of that street with Washington avenue, had nearly a whole square encircled by a stone wall, and in which he had a fine orchard. Manuel Lisa lived on Second street; the establishment of Labadie & Sarpy was on Main near Chesnut, and the Debreuils had a fine place on Second between Pine and Chesnut streets.

On the 26th of March, 1804, by an act of Congress the Province of Louisiana was divided into two parts, the Territory of Orleans and the District of Louisiana, the latter including all north of the 33d parallel of latitude. The executive power of the Government in the Territory of Indiana was extended over that of Louisiana, the Governors and Judges of the former being authorized to enact laws for the new District. Gen. William Henry Harrison, then Governor of Indiana, instituted the American authorities here under the provisions of this act, his associates being, we believe, Judges Griffin, Vanderberg, and Davis. The first courts of justice were held during the ensuing winter in the old fort near Fifth and Walnut streets, and were called Courts of Common Pleas. On the 3d of March, 1805, by another act of Congress the District was changed to the Territory of Louisiana, and James Wilkinson was appointed Governor, and with Judges R. J. Meigs and John B. C. Lucas, of the Superior Court, formed the Legislature of the Territory. The executive offices were in the old Government building on Main street, near Walnut, just south of the Public Square, called *La Place d'Armes*. Here Gen. Wilkinson was visited by Aaron Burr when the latter was planning his daring and ambitious conspiracy. When Wilkinson was appointed there were in each of the Districts of St. Charles, St. Louis, Ste. Genevieve, and Cape Girardeau a civil and military Commandant, as follows: Col. Meigs for the first, Col. Hammond for St. Louis, Maj. Seth Hunt for Ste. Genevieve, and Col. T. B. Scott for the last-named place. These officers were superseded by the organization of courts, and the names of the districts subsequently became those of counties. This system of legislation was maintained for several years, with occasional changes in officers.

In 1806 Gen. Wilkinson established the fort of Belle Fontaine, on the south side of the Missouri, a few miles above its mouth; but it was practically

abandoned early the following year, when he was ordered South to assist in arresting the Rurr conspiracy. During part of 1806 Joseph Browne was Secretary of the Territory and Acting Governor, and J. B. C. Lucas and Otho Shrader were Judges. The following year Frederic Bates was Governor, with the same Judges in office. Next year Merriweather Lewis, with the same Judges, formed the Legislature, and continued to do so until 1811.

On the 9th of November, 1809, the town of St. Louis was first incorporated, upon the petition of two-thirds of the taxable inhabitants and under the authority of an act of the Territory of Louisiana, passed the previous year.

On the 4th of June, 1812, the country received the name of the Territory of Missouri, and the government was modified and made to consist of a Governor and Legislative Assembly, the upper branch of which, numbering nine councilors, were selected out of twice that number, nominated to the Governor by the lower branch. At this time the Territory had first conceded to it the right of representation in Congress by one delegate. Anterior to this change in the government there are some events which deserve particular notice. Shortly after the country became part of the United States a post-office was permanently created in the town, the first postmaster being Rufus Easton. The first newspaper was established July, 1808, by Joseph Charles, and received the name of the *Missouri Gazette*. It was first printed on a sheet of writing-paper not much larger than a royal-octavo page. This journal was the germ of the present *Missouri Republican*, one of the largest in circulation and most influential journals of the country. The necessity of some means of transportation to and fro across the river had led to the establishment of a small ferry, which was first kept by Calvin Adams and proved a paying enterprise. His ferry consisted of two pirogues tied together with planks laid across the top, and his charge for bringing over man and horse was \$2. In August of this year two Iowa Indians were tried for murder before the Court of Oyer and Terminer, Judges Lucas and Shrader presiding. It created a good deal of excitement, but owing to some want of jurisdiction in the case the prisoners escaped the sentence of death which was passed upon them. On the 16th of September the first execution for murder in the Territory took place, the criminal being a young man who had shot his step-father. In the autumn of the next year Governor Lewis, while on a journey to Louisville, committed suicide by shooting himself while under the influence of aberration of mind.

The Municipal Government, at this time, consisted of a board of Trustees, elected under the provisions of the charter mentioned above. The Missouri Fur Company was formed in St. Louis in 1808, consisting principally of Pierre Chouteau, Manuel Lisa, William Clark, Sylvester Labadie, Pierre Menard, and Auguste Pierre Chouteau, the capital being \$40,000. An expedition was dispatched under the auspices of this company, in charge of Major A. Henry, and succeeded in establishing trading posts upon the Upper Missouri—one on Lewis river, beyond the rocky Mountains, and one on the southern branch of

the Columbia, the latter being the first post established on the great river of Oregon Territory. In 1812 this company was dissolved, most of the members establishing independent houses in the trade and for furnishing outfits to private adventurers. Among these may be mentioned the houses of Berthold & Chouteau, B. Pratte, J. P. Cabanne, and M. Lisa. The hunters and trappers at this time formed a considerable part of the population of St. Louis, and were principally half-breed Indians and white men so long accustomed to such pursuits that they were nearly similar in habits to the natives. Notwithstanding the preponderance of this reckless element, it does not appear that the town was disorderly, and crime and scenes of violence were of rare occurrence.

The first members of the Territorial Legislature, elected in 1812, sat during the ensuing winter in the old house of Joseph Robidoux, on the northeast corner of Myrtle and Main streets. It was in this year that the terrible earthquake occurred at New Madrid and vicinity, and created wide-spread dismay. The waters of the Mississippi were greatly agitated by the subterranean convulsion, and several boats with their crews were engulfed. New Madrid, which stood upon a bluff fifteen or twenty feet above the summer floods, sank so low that the next rise covered the ground to the depth of four or five feet. The channel of the river was affected materially, and the bottoms of some small lakes in the vicinity were so elevated that they became dry land.

The first English school was opened in St. Louis in 1808, by Geo. Tompkins, a young Virginian, who, when he started in the enterprise, was nearly without funds and with but few acquaintances. He rented a room on the north side of Market street, between Second and Third, for his school, and during his leisure hours pursued the study of law. The first debating society known west of the Mississippi was connected with this school, and the debates were generally open to the public and afforded interesting and instructive entertainment. This energetic young school-teacher studied law to some purpose, for he ultimately became Chief Justice of the Supreme Court of Missouri. Among the members of the society he organized were Dr. Farrar, Dr. Lowry, Major O'Fallon, Edward Bates, and Joshua Barton—names afterward rendered eminent by ability and public service. The population of the town in 1810 was about 1400. In May, 1812, the chiefs of the Osage, the Shawnees, Delawares, and other tribes, came here to accompany Gen. Wm. Clark to Washington, the purpose being to consummate some negotiations then pending and to impress the savages with some true idea of the greatness and power of the Government. This Gen. Clark was the brother of Gen. George Rogers Clark, so distinguished in the West during the Revolutionary war, and was the companion of Lewis in the famous expedition to the Upper Missouri, and had remarkable experience and judgment in dealing with the Indians. The war of 1812 between the United States and England produced but little effect upon our city, so far removed inland, but the people took a lively interest in the progress of the conflict, and participated in the general rejoicing over its honorable close.

In August, 1816, the Bank of St. Louis was incorporated, being the first institution of the kind in the town. The following gentlemen composed the commissioners: Auguste Chouteau, J. B. C. Lucas, Clement B. Penrose, Moses Austin, Bernard Pratte, Manuel Lisa, Thos. Brady, Bartholomew Berthold, Samuel Hammond, Rufus Easton, Robert Simpson, Christian Wilt and Risdon H. Price. At an election, held on the 20th of the following month, Samuel Hammond was elected President and John B. N. Smith Cashier. The career of this bank was not successful, and continued for something over two years, when it came to a disastrous close. On the 1st of February, 1817, the Missouri Bank was incorporated, the commissioners appointed by the stockholders to receive subscriptions being Charles Gratiot, Wm. Smith, John McKnight, J. B. Cabanne, and Mathew Kerr. The first President was Auguste Chouteau, and the Cashier Lilburn W. Boggs.

A census published in the *Missouri Gazette*, December 9, 1815, and taken by John W. Thompson, states that the number of souls in the town was 2,000, and the total population of county and town 7,395.

On the 2d of August an event occurred which marked the commencement of a new epoch in the history of St. Louis. Heretofore its growth had been dependent upon human energies alone, but now a new agency was to enter into its commercial life, and which was to enable her to reap the full benefit accruing from the noble river that rolled past her to the sea. The first steamboat arrived on the day named. It was called the "Pike," and was commanded by Capt. Jacob Reed. The inhabitants were, as might be expected, greatly interested and delighted as the novel craft touched the foot of Market street, many of them having never seen a vessel of the kind before. Some Indians who were in town were so alarmed at the unusual spectacle that they receded from the shore as the boat neared, and could not be persuaded to come in the vicinity of the monster, for such it seemed to them, although in reality but a tiny little vessel. She was propelled by a low-pressure engine, and had been built at Louisville. The second boat which arrived here was the "Constitution," commanded by Capt. R. P. Guyard, and the 2d of October, 1817, was the date of her arrival. In May, 1819, the first steamboat stemmed the tide of the Missouri; it was the "Independence," Capt. Nelson commanding, and went up as far as "Old Franklin," after a passage of seven running days. The first steamboat from New Orleans, the "Harriet," commanded by Capt. Armitage, reached here on the 2d of June, 1819, making the voyage in twenty-seven days.

In 1817 the first board of school trustees was formed, which may be regarded as the commencement of the present unsurpassed school system. They were: Wm. Clark, Wm. C. Carr, Thomas H. Benton, Bernard Pratte, Auguste Chouteau, Alexander McNair and John P. Cabanne. During the following year, the application of Missouri for admission into the Union gave rise to a most exciting political agitation, in which the whole nation participated. The Southern members of Congress insisted that the new State should be admitted without restriction as to slavery, while the members from the North as bitterly opposed any extension of the slave system. It is not our province to more

than mention the interesting and important aspect of the discussion that ensued, as it is a subject fully treated in the political history of the country. The result was the celebrated "Missouri Compromise," which in effect allowed the formation of the Missouri constitution without restriction, but declared that slavery should not extend in any new-formed State north of 36 degrees 40 minutes north latitude. The convention which framed the first Constitution of the State of Missouri assembled in 1820 in this city. The place of meeting was the Mansion House, then a building of considerable importance, on the corner of Third and Vine streets, now known as the City Hotel.

Mr. John Jacob Astor established a branch of his house in this city in 1819, under the charge of Mr. Samuel Abbott, and it was called the Western Department of the American Fur Company. This company entered upon a most successful career, embracing in its trade the northern and western parts of the United States, east of the Rocky Mountains. About this time the old Missouri Fur Company was revived, with new partners, among whom were Maj. John Pilcher, M. Lisa, Thomas Hempstead and Capt. Perkins. We may incidentally mention that in 1823 a hunting and trapping party of this company, under Messrs. Jones and Immel, while on the Yellowstone, were attacked by Black Feet Indians. The leaders and several of the party were killed, and those who escaped were robbed of whatever property they had with them. This company only continued a few years, and was not successful. The important expedition of Gen. Wm. H. Ashley took place also in this year, and resulted in the discovery of the Southern pass of the Rocky Mountains, and the opening of commercial intercourse with the countries west of the same. The General encountered fierce opposition from the Indians, and lost fourteen men, and had ten wounded in a fight at the outset of the expedition.

A city directory was published in 1821, which furnishes some interesting information respecting the condition of the town at the time, and from which we make the following extracts:

"It is but about forty years since the now flourishing but yet more promising State of Missouri was but a vast wilderness, many of the inhabitants of this country yet remembering the time when they met together to kill the buffalo at the same place where Mr. Philipson's ox saw and flour mill is now erected, and on Mill creek, near to where Mr. Chouteau's mill now stands. What a prodigious change has been operated! St. Louis is now ornamented with a great number of brick buildings, and both the scholar and the courtier could move in a circle suiting their choice and taste.

"By the exertions of the Right Rev. Bishop Louis Wm. Du Bourg, the inhabitants have seen a fine cathedral rise at the same spot where stood an old log church. * * * This elegant building was commenced in 1818, under the superintendence of Mr. Gabriel Paul, the architect, and is only in part completed. As it now stands it is 40 feet by 135 in depth and 40 feet in height. When completed it will have a wing on each side running its whole length 22½ feet wide and 25 in height, giving it a front of 85 feet. It will have a steeple the same height as the depth of the building, which will be provided with several large bells expected from France. The lot on which the church,

college and other buildings are erected embraces a complete square, a part of which is used as a burial ground.

* * * * *

"It is a truly delightful sight, to an American of taste, to find in one of the remotest towns in the Union, a church decorated with *original* paintings of Rubens, Raphael, Guido, Paul Veronese and a number of others by the first modern masters of the Italian, French and Flemish schools. The ancient and precious gold embroideries which the St. Louis Cathedral possesses would certainly decorate any museum in the world. All this is due to the liberality of the Catholics of Europe, who presented these rich articles to Bishop Du Bourg, on his last tour through France, Italy, Sicily and the Netherlands. Among the liberal benefactors could be named many princes and princesses, but we will only insert the names of Louis XVIII., the present King of France, and that of the Baroness Le Candele de Ghysseghern, a Flemish lady, to whose munificence the Cathedral is particularly indebted, and who, even lately, has sent a fine, large and elegant organ, fit to correspond with the rest of the decorations. The Bishop possesses beside, a very elegant and valuable library containing about 8,000 volumes, and which is without doubt, the most complete scientific and literary repertory of the Western country, if not of the Western world. Though it is not public, there is no doubt but the man of science, the antiquary and the linguist, will obtain a ready access to it, and find the Bishop a man at once endowed with the elegance and politeness of the courtier, the piety and zeal of the apostle, and the learning of a father of the church. Connected with this establishment is the St. Louis College, under the direction of Bishop Du Bourg. It is a two-story brick building and has about sixty-five students, who are taught the Greek, Latin, French, English, Spanish, and Italian languages, mathematics, elementary and transcendent, drawing, &c. There are several teachers. Connected with the college is an ecclesiastical seminary, at the Barrens, in Ste. Genevieve county, where divinity, the oriental languages and philosophy are taught.

"St. Louis likewise contains ten common schools; a brick Baptist church, 40 feet by 60, built in 1819, and an Episcopal church of wood. The Methodist congregation hold their meetings in the old Court House, and the Presbyterians in the Circuit Court room." We gather the following additional facts from the same work: 'There were three newspapers then in the city, the *St. Louis Enquirer*, *Missouri Gazette*, and *St. Louis Register*.

* * * * *

"Eight streets run parallel with the river, and are interserted by twenty-three others at right angles; three of the preceding are in the *lower* part of the town, and the five others in the *upper* part. The streets in the lower part of the town are narrow, being from thirty-two to thirty-eight and a half feet in width; those on 'the Hill' or upper part, are much wider. 'The Hill' is much the most pleasant and salubrious, and will no doubt become the most improved. The lower end of Market street is well paved, and the trustees of the town have passed an ordinance for paving the sidewalks of Main street, being the second from and parallel to the river, and principal one for business.

This is a very wholesome regulation of the trustees, and is the more necessary, as this and many other streets are sometimes so extremely muddy as to be rendered almost impassable. It is hoped that the trustees will next pave the middle of Main street, and that they will proceed gradually to improve the other streets, which will contribute to make the town more healthy, add to the value of property, and make it a desirable place of residence. On the Hill, in the center of the town, is a public square, two hundred and forty by three hundred feet, on which it is intended to build an elegant court-house. The various courts are held at present in buildings adjacent to the public square. A new stone jail of two stories, seventy feet front by thirty deep, stands west of the site of the court-house. Market street is in the middle of the town, and is the line dividing the north part from the south. Those streets running north from Market street have the addition of *North* to their names, and those running in the opposite direction, *South*. For example: North Main street, South Main street, North A, &c. street, South A street. The houses were first numbered by the publisher of this Directory, in May, 1821. The fortifications erected in early times for the defense of the place, stand principally on the Hill. They consist of several circular stone towers, about fifteen feet in height and twenty in diameter, a wooden block-house and a large stone bastion, the interior of which is used as a garden by Captain A. Wetmore of the United States army.

"Just above the town are several Indian mounds and remains of antiquity, which afford an extensive and most charming view of the town and beautiful surrounding country, situated in the two States of Missouri and Illinois, which are separated by the majestic Mississippi, and which is likewise observed in the scene, as he glides along in all his greatness. Adjacent to the large mound, nearest the town, is the Mound Garden, belonging to Colonel Elias Rector, and kept by Mr. James Gray as a place of entertainment and recreation. The proprietor has displayed considerable taste in laying it out in beds and walks, and in ornamenting it with flowers and shrubbery. In short, it affords a delightful and pleasant retreat from the noise, heat and dust of a busy town.

"There is a Masonic hall in which the grand Lodge of the State of Missouri, the Royal Arch, and the Master Masons' Lodges are held. Connected with this excellent institution is a burying-ground, where poor Masons are interred at the expense of the fraternity. The council chamber of Governor Wm. Clark, where he gives audience to the chiefs of the various tribes of Indians who visit St. Louis, contains probably the most complete museum of Indian curiosities to be met with anywhere in the United States, and the Governor is so polite as to permit its being visited by any person of respectability at any time.

* * * * *

"Population in 1810, 1,000; in 1818, 3,500, and at this time (1821), about 5,500. The town and county contain 9,732. The population is much mixed, consisting principally of Americans from every part of the Union, the original and other French, of whom there are one hundred and fifty-five families, and foreigners of various nations; consequently the society is much diversified

and has no fixed character. This, the reader will perceive, arises from the situation of the country, in itself new, flourishing and changing; still, that class who compose the respectable part of the community are hospitable, polite and well-informed. And here I must take occasion, in justice to the town and country, to protest against the many calumnies circulated abroad, to the prejudice of St. Louis, respecting the manners and dispositions of the inhabitants. Persons meet here with dissimilar habits produced by a different education, and possessing various peculiarities. It is not therefore surprising that, in a place composed of such discordant materials, there should be occasional differences and difficulties. But the reader may be assured that old-established inhabitants have little participation in transactions which have, so much injured the town.

“St. Louis has grown very rapidly. There is not, however, so much improvement going on at this time, owing to the check caused by general and universal pressure that pervades the country. This state of things can only be temporary here, for it possesses such permanent advantages from its local and geographical situation that it must, ere some distant day, become a place of great importance, being more central with regard to the whole territory belonging to the United States than any other considerable town, and uniting the advantages of the three great rivers, Mississippi, Missouri and Illinois, of the trade of which it is the emporium.

“The Missouri Fur Company was formed by several gentlemen of St. Louis in 1819, for the purpose of trading on the Missouri river and its waters. The principal establishment of the company is at Council Bluffs, yet they have several other of minor consequence several hundred miles above, and it is expected that the establishment will be extended shortly up as high as the Mandan villages. The actual capital invested in the trade is supposed to amount at this time to about \$70,000. They have in their employ, exclusive of their partners on the river, twenty-five clerks and interpreters and seventy laboring men.

“It is estimated that the annual value of the Indian trade of the Mississippi and Missouri rivers is \$600,000. The annual amount of imports to this town is stated at upwards of \$2,000,000. The commerce by water is carried on by a great number of steamboats, barges and keel-boats. These center here, after performing the greatest inland voyages known in the world. The principal articles of trade are fur, peltry and lead. The agricultural productions are Indian corn, wheat, rye, barley, oats, buckwheat, tobacco and other articles common to the Western country. Excellent mill-stones are found and made in this county. Stone coal is abundant, and saltpetre and common salt have been made within a few miles. Within three or four miles are several springs of good water, and seven miles south-west is a sulphur spring. In the vicinity are two natural caverns, in limestone rocks. Two miles above town, at North St. Louis, is a steam saw-mill, and several common mills are on the neighboring streams. The roads leading from St. Louis are very good, and it is expected that the great national turnpike from Washington will strike this place, as the commissioners for the United States have reported in favor of it.

"There were two fire engines with organized companies, one of which was stationed in the northern, the other in the southern part of the town. Two steam ferry-boats, the property of Mr. Samuel Wiggins, were in regular operation between the city and the opposite shore, and the river at the ferry was one mile and one-eighth in width. "Opposite the upper part of the town and above the ferry is an island about one mile and one-half in length and containing upwards of 1,000 acres, the property also of Mr. Wiggins. A considerable sand-bar has been formed in the river adjoining the lower part of the town, which extends far out and has thrown the main channel over on the Illinois side; when the water is low it is entirely dry and covered with an immense quantity of drift-wood nearly sufficient to supply the town with fuel, costing only the trouble of cutting and hauling. This is of great consequence to the inhabitants, particularly as the growth of wood is small in the immediate neighborhood on this side of the river. Wood is likewise brought down the river in large quantities for disposal."

Only about four years had elapsed from the arrival of the first steamboat at St. Louis to the time this directory was published, yet it is evident that municipal growth had been exceedingly rapid; business of all kinds, particularly in furs, peltries, lead and agricultural productions, had expanded greatly, while numbers of steamboats, barges and other craft were constantly engaged in the river commerce. In fact, even at this early period the inhabitants appear to have had some idea of the great future before their city. The career of St. Louis as an incorporated city may be dated from December 9, 1822, when an act was passed by the State Legislature entitled "An act to incorporate the inhabitants of the town of St. Louis; and in April following, an election took place for Mayor and nine Aldermen, in accordance with the provisions of the act. William Carr Lane was elected Mayor, with the following Aldermen: Thomas McKnight, James Kennerley, Philip Rocheblane, Archibald Gamble, Wm. H. Savage, Robert Nash, James Loper, Henry Von Phul and James Lackman. The new city government proved a most effective one and immediately set about the improvement of the city. An ordinance was passed for the grading of Main street and compelling citizens to improve streets in front of their lots. The salary of the Mayor was only \$300 per annum, but he applied himself with as much earnestness and assiduity to the public service as if he were receiving the present salary of \$4,000. Before proceeding to sketch the progress of St. Louis as an incorporated city, the following items may be mentioned as illustrating the progress of building up to that time: Chouteau's row in block No. 7 was begun in 1818 and finished in 1819. During the same years three other buildings of an important character were erected; the first by Gen. Clark, the second by Bernard Pratte, at the corner of Market and Water streets, and the third, a large warehouse, by A. Chouteau, in block No. 6. The Catholic Church, a large brick building on Second street, long since demolished, was constructed in 1818, and on Christmas day, 1819, divine service was performed there for the first time. The first paving which was laid in St. Louis was executed by Wm. Deckers, with stone on edge, on Market street, between Main and Water.

In 1821 the first brick pavement was laid on Second street, and finally it may be mentioned that the first *brick* dwelling was built in 1813 by Wm. C. Carr. There was, at the time we now speak of, but little indications of settlement on the eastern bank of the river opposite St. Louis, but the long strip of land near the Illinois shore had already earned the right to the title of Bloody Island, as more than one fatal duel had taken place there. The first was that between Thos. H. Benton, subsequently so distinguished a citizen, and Charles Lucas. The difficulty between the parties originated during a trial in which both were engaged as counsel. *Col. Benton, believing himself insulted, challenged Mr. Lucas, who declined on the ground that statements made to a jury could not properly be considered a cause for such a meeting. The ill feeling thus created was aggravated by a subsequent political controversy, and Mr. Lucas challenged Mr. Benton, who accepted. The meeting took place on Bloody Island on the morning of August 12, 1817, pistols being the weapons used. Mr. Lucas was severely wounded in the neck, and owing to the effusion of blood, was withdrawn from the field. A temporary reconciliation followed this duel, but the feud between the parties broke out afresh shortly afterwards, and another duel took place on Bloody Island, resulting in the killing of young Lucas at the age of twenty-five. This deplorable re-encounter occurred on the 27th of September, 1817. During the following year another duel occurred on Bloody Island, which also resulted fatally, the combatants being Captains Martin and Ramsey, of the U. S. army, who were stationed at the Fort Belle Fontaine, on the Missouri river. Ramsey was wounded and died a few days afterwards, and was buried with Masonic and military honors. On the 30th of June, 1818, a hostile meeting took place at the same locality between Joshua Barton, District Attorney of the United States, resident in St. Louis, and Thos. C. Rector. The parties met in the evening, and Mr. Barton fell mortally wounded. An article which appeared in the *Missouri Republican*, charging Gen. Wm. Rector, then United States Surveyor, with corruption in office, was the cause of the duel. The General was in Washington at the time, and his brother Thos. C. Rector, warmly espoused his cause, and learning that Mr. Barton was the author of the charge, sent him the challenge which resulted so satally. Various other rencounters between the adherents to the "code of honor" took place at later dates on Bloody Island, so that the reader will see that its sanguinary appellation had a reasonable and appropriate origin. The more prominent of the other duels which occurred there will be mentioned when we reach their appropriate dates.

Notwithstanding the disastrous conflicts between the Indians and the followers of the Rocky Mountains and Missouri Fur Companies, which occurred in 1823, the progress of trade and exploration, under the daring leadership of Gen. Wm. H. Ashley and others, was not seriously retarded. Benj. O'Fallon, U. S. agent for Indian affairs, writes to Gen. Wm. Clark, superintendent of Indian affairs, given an account of the misfortunes to Gen. Ashley's command, and adds: "Many circumstances have transpired to induce the belief that the

*Charles Lucas challenged Thos. H. Benton's vote, and Benton called Lucas an "insolent puppy," which was the cause of the duel.

British traders (Hudson's Bay Company) are exciting the Indians against us, either to drive us from that quarter, or reap with the Indians the fruits of our labors." It is evident from all the records of that time, that trade and exploration in the Upper Missouri and Rocky Mountain region were environed with extraordinary hardships and perils, and nothing but the greatest courage, energy and endurance could have accomplished their advancement. In 1824 Gen. Ashley made another expedition, penetrating as far as the great Utah Lake, near which he discovered another and a smaller, to which he gave his own name. In this vicinity he established a fort, and two years afterwards a six-pound cannon was drawn from Missouri to this fort, 1200 miles, and in 1828 many loaded wagons performed the same journey. Between the years 1824 and 1827 Gen. Ashley's men sent furs to this city to the value of over \$200,000. The General, having achieved a handsome competence during his perilous career, sold out all his interests and establishments to the Rocky Mountain Fur Company, in which Messrs. J. S. Smith, David E. Jackson, and Wm. L. Sublette were principals, Mr. Robert Campbell then holding the position of clerk. The followers of this company penetrated the far West in every direction and had many conflicts with the Indians, and "traversed every part of the country about the southern branches of the Columbia, and ransacked nearly the whole of California." It is stated on good authority that during the five years from 1825 to 1830, of the number of our men engaged in the fur trade two-fifths were killed by the Indians or died victims to the dangers of exploring a wilderness.

In 1824 Frederic Bates was elected Governor, defeating Gen. Wm. Ashley after an exciting political contest; but he did not long enjoy the honors of the position, for he was attacked by pleurisy and died in August of the following year.

We now reach the date of an interesting event in the history of St. Louis, namely, the visit of Lafayette, who reached Carondelet on the 28th of April, 1825, and the next morning came up to the city. He was tendered a most enthusiastic reception, as many of the citizens were not only of the same nationality but all were familiar with his name and fame. He landed opposite the old Market House, where half the town were assembled awaiting his arrival and received him with cheers, took his seat in a carriage, accompanied by Wm. Carr Lane, Mayor, Stephen Hempstead, an officer of the Revolution, and Col. Auguste Chouteau, one of the companions of Laeclde. Apart from private hospitalities, a splendid banquet and ball were given the distinguished visitor at the Mansion House, then the prominent hotel and situated on the northeast corner of Third and Market streets. Lafayette was at this time sixty-eight years of age but still active and strong; he was accompanied by his son, George Washington Lafayette, and some distinguished gentlemen from the South. The next morning he left for Kaskaskia, being escorted to the boat by crowds of citizens who in every way manifested their esteem and respect, and his visit has always been regarded as a memorable local incident.

During this year measures were taken to locate a permanent route across the plains. Major Sibley, one of the commissioners appointed by government,

set out from St. Louis in June, accompanied by Joseph C. Brown and Captain Gamble, with seven wagons containing various goods for trading with the Indians on the road. The party selected a route to Sante Fe, which afterwards was adopted as the general highway for intercourse and trade.

The first Episcopal church of any architectural importance was erected in this year at the corner of Third and Chestnut streets. It afterwards passed into the hands of the Baptists, and finally disappeared as business houses multiplied in the vicinity. The first Presbyterian church was erected in 1825, near the corner of Fourth and St. Charles streets, and was consecrated by the Rev. Samuel Giddings, but also disappeared as business limits expanded. The first steps towards building a Court House were taken in 1826, and the building, a large one of brick, was erected in the following year, and which was destined to be succeeded by the present superb structure of stone. Antonie Chenie built the first three-story house on Main street in 1825, and it was occupied by Tracy & Wahrendoff and James Clemens, Jr.; Jefferson Barracks was commenced in July, 1826, and Centre Market in 1827. The U. S. Arsenal was authorized by Congress in 1826, and was commenced during the next year on the block where it is now situated, but it was many years before it was completed. An ordinance was passed in 1826 changing the names of the streets with the exception of Market street. From 1809 those running west from the river, excepting Market, had been designated by letters, and they now received in most instances the names by which they are at present known. From the last date to 1830 no events of prominent interest mark the history of St. Louis. Different ordinances were passed for the grading, paving and general improvement of streets; and the growth of the city, if not rapid, was steady and satisfactory. Daniel D. Page was elected Mayor in 1829 and proved an energetic and valuable executive. Dr. Robert Simpson was elected Sheriff by a large majority over Frederic Hyat, his opponent. The branch Bank of the United States was established here during this year. Col. John O'Fallon was appointed president and Henry S. Coxe cashier, and during the years it continued in existence, possessed the public confidence and closed its career without disaster.

In 1830 the number of brick buildings in the city increased considerably, as the multiplication of brick-yards brought that material more into general use; a bridge was erected across Mill creek on lower Fourth street; and, architecturally and commercially, there were evidences of solid advancement. The large yards and gardens, which surrounded so many of the dwellings and stores of earlier times, gradually disappeared with the growth of improvements. Some excitement was caused this year by the decisions rendered by Judge James H. Peck, of the United States District Court, in regard to land claims, which were of a stringent character. Judge Lawless, who was interested as counsel in some cases in which Auguste Chouteau and others, and the heirs of Mackey Wherry, were plaintiffs *vs.* the United States, having avowed the authorship of a rather severe criticism which appeared in one of the newspapers on some decisions of Judge Peck, was committed to prison for contempt of court. He was released after a few hours, on a writ of *habeas corpus*, and

subsequently preferred charges against Judge Peck before the House of Representatives, which, however, were dismissed after some examination. On the first day of August, in this year, the corner-stone of the Cathedral on Walnut street, between Second and Third, was laid with religious ceremonies, and this building is now the oldest place of worship in the city, as all those erected previously have given place to other edifices.

The population of the city in 1831 was 5,963. Various measures were adopted this year for public improvement, and an ordinance was passed for building the Broadway Market. The Missouri Insurance Company was incorporated with a capital of \$100,000, and George Collier was elected president. In August a most shocking and fatal duel occurred on Bloody Island. Spencer Pettis, a young lawyer of promise, was a candidate for Congress, his opponent being David Barton. Major Biddle made some severe criticisms on Mr. Pettis through the newspapers, and a challenge passed and was accepted. They fought at five paces distant, and at the first fire both fell mortally wounded. Mr. Pettis died in about twenty-four hours, while Major Biddle survived only a few days. The former had just gained his election, and Gen. Wm. H. Ashley was elected to fill the vacancy caused by his death.

In 1832 the famous expedition of Capt. Bonneville took place, and important steps were made in the opening of the great country to the West. Fort William was established on the Arkansas by the Messrs. Bent, of this city. Messrs. Sublette and Campbell went to the mountains. Mr. Wyeth established Fort Hall on the Lewis river, and the American Fur Company sent the first steamboat to the Yellow Stone. The Asiatic cholera visited the city this summer, having first invaded Eastern and Southern cities. It first broke out at Jefferson Barracks, and, notwithstanding the most energetic sanitary measures, soon spread through the town with alarming severity. The population was then 6,918, and the deaths averaged, for some time, more than thirty a day. The disease prevailed for little over a month, then abated and disappeared. In this fall Daniel Dunklin, the Jackson candidate, was elected Governor, and L. A. Boggs Lieutenant-Governor. During the next year an effort was made to impeach Wm. C. Carr, one of the Circuit Judges, and one of the oldest citizens, the charge being that he was wholly unqualified for judicial station. On examination of the case before both Houses of the Legislature he was acquitted. Dr. Samuel Merry was elected Mayor, but was declared ineligible on the ground of being a receiver of public moneys, which office he held under the appointment of the President, and the next autumn Col. John W. Johnson was elected in his place. The taxable property was valued, in 1833, at only \$2,000,000, and the whole tax of the year on real and personal property amounted only to \$2,745.84. The tonnage of boats belonging to the port was hardly 2,000, and the fees for wharfage not more than \$600.

In 1834 Mr. Astor retired from business and sold his Western department to Messrs. B. Pratte, P. Chouteau, Jr., and Mr. Cabanne, who conducted the business until 1839. A few years after this latter date nearly the entire fur

trade of the West was controlled by the house of Pierre Chouteau, Jr., & Co., and the firm of Messrs. Bent & St. Vrain.

The business of the city was now developing rapidly, although the lack of proper banking facilities made itself felt somewhat injuriously; and while the unfortunate careers of the Bank of St. Louis and the Bank of Missouri had tended to make the people distrustful of such institutions, the want of them was generally recognized. During 1835-6 applications were made to the Legislature, to supply this deficiency, but without success, and finally the banks of the other States were invited to establish branches in this city. Immigration at this period was unusually large, and a vigorous activity prevailed every department of business. As an illustration of this we quote from one of the newspapers: "The prosperity of our city is laid deep and broad. * * * * * Whether we turn to the right or to the left, we see workmen busy in laying the foundation or finishing some costly edifice. The dilapidated and antique structure of the original settler is fast giving way to the spacious and lofty blocks of brick and stone. But comparatively a few years ago, even within the remembrance of our young men, our town was confined to one or two streets running parallel with the river. The 'half-moon' fortifications, the 'bastion,' the tower, the rampart, were then known as the utmost limits. What was then termed 'The Hill,' now forming the most beautiful part of the town, covered with elegant mansions, but a few years ago was covered with shrubbery. A tract of land was purchased by a gentleman now living, as we have understood, for two barrels of whisky, which is now worth half a million of dollars. * * * * * Intimately connected with the prosperity of the city is the fate of the petition pending in Congress for the removal of the sandbar now forming in front of our steamboat landing."

The number of boats in 1835, exclusive of barges was, 121; aggregate tonnage 15,470 tons, and total wharfage collected \$4,573. In March of this year the sale of the town commons was ordered by the City Council, and in accordance with the act of the Legislature nine-tenths of the proceeds was appropriated to the improvement of streets and one-tenth to the support of public schools. The sum realized for the latter was small, but it assisted materially in laying the foundation of the present system, so extensive and beneficent in its operation. John F. Darby was elected Mayor in 1835, and during that year a meeting of citizens was called for the purpose of memorializing Congress to direct the great national road, then building, to cross the Mississippi at St. Louis, in its extension to Jefferson City. Mr. Darby presided at the meeting and George K. McGunnegle acted as secretary. The popular interest in railroad enterprises which at this time prevailed in the East soon reached as far as St. Louis, and on the 20th of April, 1835, an Internal Improvement Convention was held in this city. Delegations from the counties in the State interested in the movement were invited to attend. Dr. Samuel Merry acted as chairman and Mr. McGunnegle as secretary. The two railroad lines particularly advocated were from St. Louis to Fayette, and from the same point to the iron and lead mines in the southern portion of the State. A banquet at the National Hotel followed the convention, and the event had

doubtless an important influence in fostering railroad interests, always so important in the life of a community.

A most exciting local incident occurred shortly after the sitting of the convention. A negro named Francis L. McIntosh had been arrested for assisting a steamboat hand to escape who was in custody for some offense. He was taken to a justice's office, where the case was examined, and the prisoner, unable to furnish the requisite bail, was delivered to Mr. Wm. Mull, deputy constable, to be taken to jail. While on the way there, Mr. George Hammond, the Sheriff's deputy, met Mr. Mull and volunteered to assist him in conducting his charge to the jail. The three men walked on together, and when near the northeast corner of the Court House block, the negro asked Mr. Hammond what would be done to him for the offense committed. He replied, in jest, "perhaps you will be hanged." The prisoner in a moment jerked himself free from the grasp of Mull, and struck at him with a boatman's knife; the first stroke missed, but another followed inflicting a severe wound in the left side of the constable. Mr. Hammond then seized the negro by the collar and pulled him back, when the latter struck him in the neck with the knife, severing the important arteries. The wounded man ran some steps towards his own home, when he fell from loss of blood and expired in a few moments. The negro fled after this bloody work, pursued by Mull, who raised the alarm by shouting until he fainted from loss of blood. A number of citizens joined in the pursuit, and the murderer was finally captured and lodged in jail. An intense public excitement was created, and an angry multitude of people gathered round the jail. The prisoner was given up to them when demanded, by the affrighted jailor, and he was seized and dragged to a point near the corner of Seventh and Chestnut streets, where the cries of the mob—"burn him! burn him!"—were literally carried into effect. The wretched culprit was bound to a small locust tree, some brush and other dry wood piled around him and set on fire. Mr. Joseph Charless, son of the founder of the *Republican*, made an ineffectual effort to dissuade the crowd from their awful purpose, but he was not listened to, and in sullen and unpitying silence they stood round the fire and watched the agonies of their victim. In 1836, the corner stone of the St. Louis Theatre was laid at the corner of Third and Olive streets, on the site now occupied by the Custom House and Post Office, the parties principally interested in the enterprise being N. M. Ludlow, E. H. Bebee, H. S. Coxe, J. C. Lavielle, L. M. Clark and C. Keemle. The building erected was quite a handsome one, and the theatre was carried on for a number of years until the property was purchased by the United States and the present government buildings erected. The Central Fire Company of the city of St. Louis was also incorporated this year. The first steam flour mill erected in St. Louis by Captain Martin Thomas, was burned down on the night of the 10th of July this year. On the 20th of September the daily issue of the *Missouri Republican* commenced.

On the 1st of February, 1837, the Bank of the State of Missouri was incorporated by the Legislature with a capital of \$5,000,000. The first officers elected were John Smith, president of the parent bank, with the following

directors: Hugh O'Neal, Samuel S. Rayburn, Edward Walsh, Edward Dobyns, Wm. L. Sublette and John O'Fallon, all of St. Louis. A branch was also established at Lafayette, and J. J. Lowry was appointed president. Not long after the passage of the act incorporating the State Bank, another was passed excluding all other banking agencies from the State. The new bank with its great privileges and brilliant prospects opened business in a house owned by Pierre Chouteau on Main street near Vine. The total tonnage of the port in 1836 was 19,447 tons, and the amount of wharfage collected between \$7,000 and \$8,000. In 1837 the Planters' House was commenced, but owing to the financial embarrassments of the year, the progress of the building was slow. Early this summer Daniel Webster visited the city and was received with the utmost cordiality and enthusiasm. It was expected that Henry Clay would accompany him, but he was prevented by business engagements. The distinguished guest and his family stopped at the National Hotel and remained for several days. A public festival or barbecue was given them in a grove on the land of Judge Lucas, west of Ninth street, and the occasion became peculiarly memorable from the fact that Mr. Webster delivered an eloquent speech.

The general financial disasters of 1837 were felt to a serious extent in St. Louis, and the Bank of the State of Missouri suspended temporarily. On September 26th, David Barton, a colleague of Col. Thos. H. Benton, in the U. S. Senate, and one of the most distinguished citizens of the State, died in Cooper county, at the residence of Mr. Gibson. In the summer of the next year Thos. M. Doherty, one of the Judges of St. Louis county, was mysteriously murdered on the road between this city and Carondelet, and the murderers were never discovered. In the fall Gen. Wm. Clark died. He was the oldest American resident in St. Louis, was the first Governor of the Territory of Missouri, and as superintendent of Indian affairs rendered important public services. During this year Kemper College, which was built principally through the exertions of Bishop Kemper, was open. The medical department was formed shortly after, and owed its origin to Drs. Joseph N. McDowell and J. W. Hall. On the 20th of November the Legislature met at Jefferson City, and during its session, which lasted until February, 1839, some important acts were passed in connection with St. Louis. The Criminal Court was established, over which the Hon. James B. Bowlin presided as Judge for several years. A bill was passed to incorporate the St. Louis Hotel Company, under the auspices of which the Planters' House was completed. A Mayor's Court was also established for the purpose of disposing of trials for breach of city ordinances. A charter was granted to the St. Louis Gaslight Company, but the streets were not lighted with gas by this corporation for many years afterwards. The present gas company holds its exclusive privileges under this charter; and although the original intention of the Legislature was that the city should have the authority to purchase the works at a certain specified period, this has not been done and probably never will be. The charter expires by limitation in 1889. Christ Church was erected during this year, on the southwest corner of Chesnut and Fifth streets, but after a few years yielded

up its site to business edifices. Considerable agitation was current about this time, owing to the action of the officers of the Bank of the State of Missouri in refusing to receive the notes of any suspended banks on deposit or in payment at their counter. This resolution was caused by the financial disturbance that pervaded the country and the fact that a number of banks in different States of the Union had again suspended specie payments. A strong effort was made by the merchants of the city to procure a rescinding of the resolution, and ten gentlemen, among the most prominent and wealthy in the city, offered to legally bind themselves to indemnify the bank against any loss that might be sustained by the depreciation of the notes of any of the suspended banks. The directors, however, after a consultation, refused the proposition and adhered to their cautious policy, notwithstanding that some of their best patrons withdrew their deposits in irritation at this course. The result, however, showed that the bank acted wisely, and the public confidence in it was rather increased than impaired. The County Court ordered the commencement of an important addition to the Court House, commenced in 1825-6, and the corner-stone was laid with the usual ceremonies in the presence of a large concourse of citizens.

The total arrivals of steamboats at this port during the year 1839 was 2,095; departures 1,645. In the spring of 1840 the corner-stone of the Catholic church attached to the St. Louis University was laid and a number of other buildings erected. During this year, the unfortunate affray between Mr. Andrew J. Davis, proprietor of the *Argus*, and Mr. Wm. P. Darnes, occurred, arising from some severe remarks published in the journal named reflecting on the latter. The parties chanced to meet on Third street near the National Hotel, and Mr. Davis received several blows on the head from an iron cane in the hands of Mr. Darnes, and subsequently died from the effects. The trial of Darnes took place in November, and he was found guilty of manslaughter in the fourth degree and fined \$500. The steamer Meteor made the trip from New Orleans to this city in five days and five hours, during the early part of this season, being the quickest trip ever made up to that time. The Hon. John F. Darby, the Whig candidate, was elected Mayor in April, and at the election for county officers in August the same party was successful. There were ten insurance companies in existence in St. Louis in the year 1841, many of which carried on a semi-banking business.

In April, two young men, Jacob Weaver and Jesse Baker, met a shocking and violent death. They slept in a room in a large stone building on the corner of Pine and Water streets, occupied in front by Messrs. Simonds & Morrison, and in the rear by Mr. Wm. G. Pettus, banker and broker. An alarm of fire came from this building early on Sunday morning, April 18th, and one of the fireman, in forcing open the rear door, discovered the body of Jacob Weaver, lying in a pool of blood and evidently the victim of a cruel murder. The remains of Jesse Baker were discovered the next day in the ruins of the building, which was nearly destroyed, and hardly a doubt remained that he had also been murdered. It may be mentioned, that A. S. Kembell, first engineer of the Union Fire Company, was killed during the progress of the fire, by a portion

of the wall falling on him. Subsequent investigations into the crimes, led to the arrest of four negroes named Madison, Brown, Seward and Warriek, who, it was shown, had been influenced to enter the building by the hope of robbery. They were all convicted of murder in the first degree, and were executed upon the island opposite the lower part of the city, and the four-fold execution became so memorable an event, that the time was often alluded to as that "when the negroes were hung."

The Legislature extended the city limits considerably this year, and the Mayor and Aldermen were authorized to divide the city into five wards. At the municipal election, in April, John D. Daggett was elected Mayor, and in the same month the Planters' House was opened by Messrs. Stickney & Knight as proprietors.

There were now in the city two colleges, the St. Louis University and Kemper College, with a medical school attached to each. The churches were as follows: two Catholic, two Presbyterian, two Episcopal, two Methodist, one Baptist, one Associate Reform Presbyterian, one Unitarian, one German Lutheran and two for colored congregations. There were two Orphan Asylums, one under the charge of the Sisters of Charity, and one under the control of Protestant ladies. The Sisters' Hospital was in operation, and there were several hotels, the principal of which was the Planters' House; six grist-mills, six breweries, two foundries, and a number of other manufactories of different characters. Steamboat building had also been established as a permanent business, the originators being, it is stated, Messrs. Case & Nelson, and on all sides there were indications that the city was fairly launched on a prosperous career.

Among the prominent events of 1842, were the election of Hon. Geo. Maguire, as Mayor, in April, and the laying of the corner-stone of the Centenary Church, at the corner of Fifth and Pine streets, on the 10th of May. This edifice long remained a prominent place of worship, but finally, in 1870, was changed into a business establishment. In the autumn of the year, the Hon. John B. C. Lucas died, one of the earliest citizens of St. Louis, and who had received from President Jefferson the appointment of Judge of the highest court in Missouri when it was the District of Louisiana. He was a man generally esteemed and respected, and his name is prominently and forever identified with the earlier years of our city. In the spring of the year, the "St. Louis Oak" was turned out from the boat-yard of Captain Irwine, ready to enter into the Galena trade, for which she had been built, and is stated to have been the first steamboat entirely built here, including machinery, engines, etc. In the May term of the St. Louis Criminal Court, the Hon. Bryan Mulvanphy, Judge of the Circuit Court, was arraigned for alleged oppression in the discharge of his judicial duties. The matter originated from the Judge having imposed three fines, of \$50 each, on Ferdinand W. Risque, a lawyer. Mr. R. feeling some indignation while in the court room at a certain ruling which was contrary to that he had expected, made some contemptuous gesture or expression of countenance, and the Judge ordered him to be seated, and for each

refusal imposed a fine, and finally ordered him to be removed from the court room by the sheriff. Judge Mullanphy was acquitted.

There were now two public schools in St. Louis, one on Fourth, the other on Sixth street, and they were numerously attended, indicating that the people fully appreciated a general system of public instruction. On the third of July, the steamer *Edna*, a Missouri river boat, which had left St. Louis the night before with a large number of emigrants on board, exploded her boiler with terrible results. Fifty-five persons lost their lives by this catastrophe, and there was a large list of injured. Gen. Henry Atkinson died this year at Jefferson Barracks, where his remains were interred. The only other incident we will mention was the murder of Major Floyd, at his residence near the Fair Grounds, on the night of the 10th of August. The crime was perpetrated by a party of five men, who robbed the house and escaped. A young man named Henry Johnson was convicted and executed for the crime, although he solemnly protested his innocence to the last moment.

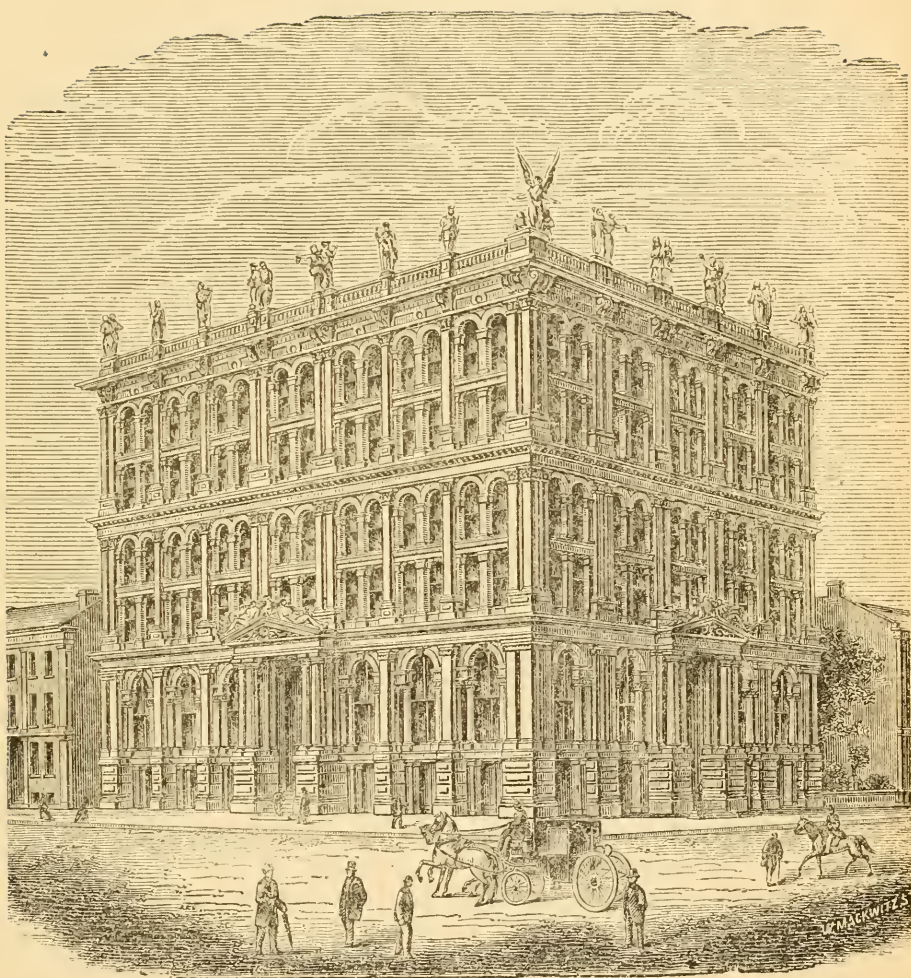
In March, 1843, Audubon, the French naturalist, visited the city on his way to the Yellowstone, in the interest of his favorite science. The business of the city improved generally this year, and there was no small activity in commerce and in building. The State Tobacco Warehouse was in course of erection, as well as some sixty stores on Front, Main and Second streets, and some three to four hundred other buildings.

In June, 1844, Macready visited the place, and being then at the highest point of his fame and abilities, he created quite a general local sensation. He was succeeded by Forrest, who divided with him popular admiration. Judge P. Hill Engle died in the early part of the year. A Catholic church of some importance was commenced in Soulard's addition. A most memorable and disastrous rise in the Mississippi took place this year. About the 8th or 10th of June, the river commenced to rise rapidly, while intelligence was received of the rising of the Illinois and Missouri rivers. The levee was soon covered, and by the 16th the curb-stones of Front street were under water, and the danger to property and business became quite alarming. At first it was regarded as merely the usual "June rise," but the continued expansion of the flood soon convinced the inhabitants of its unprecedented and alarming character. Illinoistown and Brooklyn were nearly submerged, the occupants of the houses being driven to the upper stories. The American Bottom was a turbid sea. The town of Naples was inundated, boats plying in the streets; and from all places on the rivers came intelligence of heavy losses to stock and property, and the surface of the Mississippi was nearly covered with immense masses of drift trees and other substances torn from the shores. As the reports reached St. Louis that the inhabitants of the towns and villages on the Illinois shore, and other places on the river, were in danger, active measures were taken for their relief. Captain Saltmarsh, of the steamer *Monona*, particularly distinguished himself by offering the use of his boat gratis. Between four and five hundred persons in St. Louis and vicinity were driven from their homes, and great distress prevailed. To procure means to alleviate this, a

meeting of citizens was held in front of the Court House, and a list of committees appointed to obtain subscriptions, and quite a large amount was collected. The river reached its greatest height here on the 24th of June, when it was seven feet seven inches about the city directrix. A few days before this, the glad intelligence was received that the Upper Missouri and Illinois were falling, but the effect was not immediately evident here, and the water did not reach the city directrix in its abatement until the 14th of July. The rise of 1844 obtained a greater elevation than any previous similar event. The great flood of 1785, known as *L'annee des Grandes Eaux*, was surpassed, as were also the floods of 1811 and 1826. The number of buildings erected in 1844 was 1,146, and notwithstanding the misfortune of the great flood, the year was one of general prosperity.

St. George's Episcopal Church was organized in 1845, the Rev. E. C. Hutchinson being pastor. During the summer of this year Col. Wm. Sublette died in Pittsburgh, on his way East for the benefit of his health. He belonged to one of the old families of St. Louis, and his name has been alluded to more than once before in this sketch. In August an election was held for members to the Convention to revise the Constitution, and was attended with much public interest. The City Hospital was commenced, but was not finished in its present form for several years afterward. The erection of Lucas Market was also commenced.

The Mercantile Library Association was formed in 1846, and ultimately led to the erection of the fine building now occupied by them on Fifth street. The originators of the library were John C. Tevis and Robert K. Woods, and the first meeting of citizens in connection with the project was held at the counting room of Mr. Tevis on the evening of December 30, 1846. There were eight gentlemen present, namely: Col. A. B. Chambers, Peter Powell, Robert K. Woods, John F. Franklin, R. P. Perry, Wm. P. Scott, John Halsall and John C. Tevis, all merchants, except Col. Chambers. On the 13th of January following, a meeting was held in accordance with a public call, at Concert Hall, and the Association was organized by the adoption of a constitution. On the 16th of February rooms were rented at the corner of Pine and Main streets, and in April it was open to the members. At the end of the first year the cash receipts amounted to \$2,689, the members numbering 283, with 1,680 volumes in the library. The association prospered rapidly and finally a joint stock company, designated the Mercantile Library Hall Association, was formed, the main object being the erection of a suitable building for the library. The first president was Alfred Vinton. On the 10th of June, 1851, it was determined to purchase a lot on the corner of Fifth and Locust streets, at a cost of \$25,500. A design for the building by Robert S. Mitchell was adopted and the present edifice erected. The estimated cost was \$70,000, which, with the price of the lot, made the total expenditure \$95,500. To illustrate the growth of this noble institution we may add that the present building is now insufficient for its accommodation, and the question of erecting another, fire-proof in character, at a cost of \$350,000 is being seriously considered.



BUILDING OF THE ST. LOUIS MUTUAL LIFE
INSURANCE COMPANY.

On the 10th of January, of this year, Mrs. Ann Biddle died. She was the daughter of John Mullanphy, who was the possessor of great wealth, and had established the male department of the Mullanphy Orphan Asylum, besides being identified with other enterprises of a noble and charitable character. Mrs. Biddle was the widow of Major Biddle, who was killed in the duel with Mr. Pettus on Bloody Island, and shortly after her husband's death established a Female Orphan Asylum, and even surrendered her fine residence on Broadway for religious and charitable purposes. In her will she left an appropriation for a Widows' and Infants' Asylum, whilst her private charities, of which there is no earthly record, are believed to have been very large. The inclosed monument near Tenth and Biddle streets, with its inscription, "Pray for the souls of Thomas and Ann Biddle," is familiar to many of our readers. The spot for the monument was designated by Mrs. Biddle, who bequeathed a sum of money for the purpose of its erection. It is appropriately placed in close contiguity with the noble institutions with which the names of the deceased are identified. The harbor of St. Louis again attracted public attention this year, owing to a sand-bar forming in the river nearly in front of the landing, extending from Duncan's Island nearly to Cherry street, and interruption of commerce became so evident, that the municipal and general governments were compelled to take some active measures, which resulted in the removal of the obstructions. An idea of the proportions now assumed by the commerce of the city may be gathered from the fact that in 1845 there were nearly 2,100 steamboats connected with the port, the aggregate tonnage being 358,045, and the number of keel and flat boats was 346.

The war declared between the United States and Mexico created, this year, an unusual excitement in St. Louis. Numerous volunteers came forward, and the St. Louis Legion, a military organization, prepared for the field. A meeting of citizens was held with the view of raising supplies for the volunteers, and Col. J. B. Brant started a subscription with \$1,000, and Lucas, Mullanphy, Robert Campbell, Alfred Vinton, Benjamin Stickney and others subscribed liberally, and a few days afterwards the Legion departed for the South, under command of Col. Easton, with a grand public farewell demonstration in their honor. The corner-stone of the Odd Fellows' Hall had been laid April 26th, 1845, and on the 26th of October of this year the building was dedicated.

In the early part of 1847 the Boatmen's Savings Institution was incorporated, and it commenced a career which has proven not only successful, but most beneficial to the public. The most prominent event of this year was the public anniversary celebration, on the 15th of February, of the founding of St. Louis. The grand features of the day were an imposing public pageant and a banquet. At an early hour the various societies and other bodies participating, marched to the place of rendezvous, and at ten o'clock the procession moved in the following order: Chief Marshal Col. Thornton Grimsley and his aids, followed by the military companies, and the Apprentices' Library Association bearing banners. Then came the Committee of Arrangements, and next the invited guests, the latter being the most interesting portion of the

procession. In an open carriage was seated Mr. Pierre Chouteau, president of the day, and the only survivor of those who accompanied Laclede when he founded the city on the 15th day of February, 1764. The other occupants of this carriage were Pierre Chouteau, Jr., and P. Liguette Chouteau, his sons, and Gabriel S. Chouteau. In the next carriage were the Hon. Wm. C. Carr, Col. John O'Fallon and Gen. Wm. Milburn, and in other carriages were many others of the old inhabitants of the city. Without further specifying the features of this procession, some of which were highly interesting and unique, illustrating all the industries and trades, we will state that after carrying out the line of march the pageant ceased, and the Hon. Wilson Primm, orator of the day, addressed the multitude from a stand on the east side of Fourth street, fronting the Court-House, eloquently reviewing the history of St. Louis from its founding to the date of the celebration. The address was carefully prepared and contained a quantity of valuable historical data not previously, we believe, presented in literary form. The banquet took place in the State Tobacco Warehouse and proved an exceedingly brilliant affair. Among the speakers we may mention Col. L. V. Boggy, Col. Campbell, Hon. Wm. C. Carr, Mr. Thos. Allen, Mr. Crockett, Col. Kennett, Dr. Linton, Mr. Darby, Mr. Treat, George R. Taylor and others. A ball at the Planters' House closed the proceedings of the memorable day. On December 20th of this year the telegraph lines connecting with the East, reached East St. Louis, and our city was placed in telegraphic communication with the leading cities of the country. On the 28th of the same month an important meeting of citizens took place, to consider the advisability of the city subscribing \$500,000 towards the construction of the Ohio and Mississippi railroad, the route of which from Cincinnati through Vincennes had been established. A committee of seven, comprising Messrs. Hudson, Gamble, Kennett, Darby, Kayser, Yeatman and Collier, were appointed for the purpose of petitioning the Legislature to authorize the subscription. The measure being supported by a general vote of the people, the subscription was finally made. The two most important agents in the development of commerce—the telegraph and the railroad—were now identified with the growth of St. Louis, and her advancement became accelerated greatly through their influence.

No public events of a very important character mark the year of 1848, but the career of the city, commercially and in reference to general improvements, was satisfactory. On the 22d day of June Edward Charless died in his fiftieth year. His death excited no small amount of public attention and regret, as he was very generally known, having come to this country at a very early period, with his father Joseph Charless. Several public meetings were held in connection with the intelligence of the victorious operations of our arms in Mexico, and the exciting reports of the revolutions in France and Germany. Towards the close of the year rumors prevailed of the approach of the cholera, which for more than a year previous had appeared in Europe and subsequently at different points in the United States. A few cases occurred here, and the authorities were stirred up to active sanitary precautions, but the dreaded disease did not develop itself until the ensuing spring. In April, 1849, the

Bellefontaine Cemetery was established, the ground being previously known as the "Hempstead Farm," and was purchased from Luther M. Kennett. The names of the trustees mentioned in the act of incorporation are: John F. Darby, Henry Kayser, Wayman Crow, James E. Yeatman, James Harrison, Charles S. Rannels, Gerard B. Allen, Philander Salisbury, Wm. Bennett, Augustus Brewster and Wm. M. McPherson. The cemetery is now one of the most beautiful in the country. This year was one of the most disastrous in the history of St. Louis, owing to the outbreak of the cholera and the occurrence of a terrible conflagration. About ten o'clock on Thursday night, May 19, a fire broke out on the steamer *White Cloud*, lying at the wharf between Vine and Cherry streets, and the steamboat and fire-bells soon spread the alarm throughout the city. The flames rapidly enveloped the steamer, and, notwithstanding vigorous efforts to check their course, communicated to three or four other boats in the vicinity. The *White Cloud* became loosened from the wharf and drifted down the river with the current, the blazing wreck came in collision with a number of other steamers, and in a short time twenty-three or four boats were in flames. The dreadful disaster did not, however, stop here. A stiff breeze prevailed from the northeast, and an avalanche of fiery embers was whirled over the buildings on the levee, and soon a number of them were in flames. The first which caught fire were near the corner of Locust street, and the conflagration, rapidly extending south and westward, assumed the most stupendous proportions, and the utmost excitement and dismay prevailed over the city. Without sketching in detail the devastation of the terrible calamity, we may say that it was by far the most serious of the kind that has ever visited St. Louis. All the buildings, with only a few exceptions, from Locust to Market, and between Second and the river, were destroyed or badly injured, and the progress of the fire was only arrested by blowing up buildings with gunpowder. In one of these explosions, Mr. T. B. Targee, the well-known auctioneer, was killed, and several others injured. Twenty-three steamboats, three barges and one canal boat were destroyed, the total value being estimated at about \$440,000. The whole value of property destroyed reached over \$3,000,000. The occurrence of the fire was a serious blow to our city, but the energy of its citizens was displayed in the manner with which they labored to repair its ravages, and the evidences of desolation and ruin soon disappeared, and new buildings were erected of a more substantial character than the old, and Main street was considerably widened.

We turn from the fire to the second great calamity of the year. As before stated, the coming of the cholera was heralded during the fall of '48, and early in the ensuing spring it reappeared, the number of deaths increasing daily as the summer approached, and in June it assumed a virulent epidemic form and spread dismay throughout the community. At the time of the outbreak of the disease the sanitary condition of the city was exceedingly bad, the present sewer system having hardly been commenced, and most of the alleys were unpaved and in a shocking dirty condition. When the cholera declared itself the authorities adopted energetic sanitary measures, but without avail,

and the mortality increased steadily. As is generally the case, there was a conflict of opinion respecting the disease among the physicians, and at first the medical board pronounced the use of vegetables injurious, and the City Council passed an ordinance prohibiting their sale within the city limits, but this was shortly afterwards revoked. The Council finally, on recommendation of the Committee of Public Health, adopted quarantine regulations, and a site for quarantine was adopted on Arsenal Island. Notwithstanding all the efforts made, the number of deaths increased to over 160 *per diem*, which in a city with a population of less than 64,000 indicates the truly alarming extent of the epidemic. The second day of July was observed as a day of humiliation and prayer, but it was not until late in the month that there was any sensible abatement in the epidemic, and about the middle of August it had nearly disappeared. Between June 25th and July 16th the greatest mortality occurred, and from April 30th to August 6th the total number of deaths from all causes was 5,989, of which 4,060 were from cholera, and among the host of victims were many well-known citizens and several prominent physicians. The disasters of this year seriously interrupted the progress of our city, but their effects were soon repaired, a bountiful harvest was gathered, and with the general improvement of the locality devastated by the fire, business revived and commercial facilities were extended. During the year the immense emigration to California, owing to the discovery of the gold fields and the general impression of the vast wealth and resources of the Far West, brought the project of a great railroad route across the continent prominently before the minds of our people. It was determined to call together a Mass Convention in St. Louis, for the purpose of considering the enterprise, and invitations were sent to the prominent citizens of nearly every State in the Union. The convention assembled on the 15th of October, in the Court House, and was called to order by Judge A. T. Ellis of Indiana. The result of the deliberations was a general conviction of the necessity of the road, and an influential committee was appointed to prepare an address to the people of the Union, soliciting their co-operation in inducing Congress to take the requisite action towards the end desired. It is thus evident that St. Louis citizens were the first to move in the great enterprise of a continental railroad, and there are many living to-day who participated in these preliminary measures, who now witness the practical fulfillment of the stupendous achievement which they inaugurated. The fine building on the corner of Seventh and Myrtle streets, then connected with the medical department of the St. Louis University, was built during this year, and owes its origin to the munificence of Col. John O'Fallon. Louis A. Labeaume was this year elected Assistant Treasurer of the United States, and his bondsmen were all St. Louis citizens, representing an aggregate wealth of over \$6,000,000.

An exciting and bloody affair occurred at the City Hotel on the night of the 29th of October. A day or so before, two unknown gentlemen arrived at the hotel on the corner of Third and Vine streets, then kept by Theron Barnum, and some trouble in reference to accommodations arose between them and Mr. Kirby Barnum, nephew of the proprietor, but it was settled without

anything serious having occurred. On the night mentioned, Mr. Kirby Barnum retired to his room, and shortly after a shot was fired through the window, which fatally wounded him, and in attempting to leave the room he fell in the hall. Wm. Albert Jones, who occupied a room on the same floor, on opening his door to ascertain the cause of the firing, was shot dead, and H. M. Henderson and Captain W. D. Hubbell, who were rooming with him, were both wounded. The affair produced intense excitement, and the two strangers, who were Frenchmen named Gonsalve and Raymond Montesque, were accused of the crime. On the first trial the jury did not agree and at the second, Gonsalve, who had confessed his guilt and alleged "God made him do it," was acquitted on the ground of insanity, and Raymond was shown to be innocent. The only other incident we will mention in connection with the year is the extraordinary robbery at the bank of the State of Missouri, the sum of \$120,000 having disappeared from the vaults, but the perpetrators were never discovered.

ST. LOUIS FROM 1850 TO 1870.

The twenty years embraced between 1850 and 1870 were those of the greatest development of the city as well as of the commercial energies of the entire nation. Before that period the growth of St. Louis had been comparatively slow, and although within less than a century an astonishing superstructure had been reared upon the rude foundation laid by Laclède, the real wonders of our city's history were things yet to be achieved. In 1850 the population of the city was about 74,000, less than one-fourth of that of the present. Our railroad system, our iron manufactures, our public institutions in a great measure, our hotels and business palaces, our parks, sewerage system, broad avenues, beautiful private residences, and the other innumerable features and elements which go to make up a great city, were either not in existence or barely commenced. Within two decades, what a magnificent expansion has been wrought! and yet there is no question but it will be greatly exceeded by that of the next twenty years.

In the preceding sketch we have glanced somewhat in detail at the rise and progress of our city from its foundation up to a time within the memory of most of our citizens, but its character will not permit us to continue further the narration of events in chronological order. Our object has been to connect with this book, devoted mainly to the delineation of the destiny of St. Louis, some faint portraiture of her historic past, and it is not our province to pursue the work over later years, with the events of which nearly all are familiar. It is a curious fact that from the year 1849, during which occurred such terrible disasters, may be dated the more rapid development of our city. Forth from the ruins of conflagration and the gloom of the shadow of death, she emerged on a bright and broad career with pulses bounding in exuberant life. It is indeed astonishing to review the mighty steps in civic progress which mark every year in the decades above mentioned. The Railroad Convention held in 1849 was followed quickly by substantial fruits, and on the 4th of July,

1851, ground was broken in the practical commencement of the Pacific Railroad, the company having been organized some time previously through the exertions of such citizens as Thos. Allen, James H. Lucas, Daniel D. Page, John O'Fallon and other public-spirited gentlemen. The following year witnessed the commencement of the Ohio and Mississippi Railroad, also the Terre Haute and Alton; and in 1852 the Chicago and St. Louis Railroad, then called the Alton and Sangamon line, was opened to Carlinville by a public excursion. On the 30th of June, 1855, the Ohio and Mississippi was opened to Vincennes, and on the 4th of July of that year an excursion of citizens took place to the last named place. Thus our now splendid railroad system was inaugurated, and the rapidity of its development is significantly illustrated when we refer to the list given in another part of this work, by which it is seen we have twenty-four trunk lines converging at St. Louis, nearly all in practical operation, connecting our city with every portion of the country, and sending our daily trains to the Atlantic and Pacific, the great Lakes of the North, and the waters of tropical seas. In every other department of business enterprise our progress was equally rapid and steady. Massive business structures sprung up as if by magic along the lines of our leading streets, and with the multiplication of residences the territory of the city increased every day. The splendid Lindell Hotel, commenced in 1857, gave us one of the most important structures of the kind to be found in the country, and until its lamentable destruction by fire in 1867 it formed one of the grand adornments of our city. The beautiful garden at Tower Grove, commenced in 1850, assisted materially the growth of the western part of the city. Other parks and public squares were speedily formed, and the work of street opening and other public improvements were carried on uninterruptedly by the city authorities. Our sewer system was energetically elaborated, and the old method of supplying our citizens with water was supplanted by well-constructed water-works, which have now again given place to a new system, with settling reservoirs at Bissell's Point and storage reservoir at Compton Hill, constructed at a cost of nearly \$4,000,000. The other improvements effected during the period indicated are too numerous to be specifically mentioned. Manufactories of all kinds came into existence in different portions of the city, and the wharf north and south was improved and the elevator was constructed, together with a number of storehouses and warehouse. The public school system, from its small beginnings before mentioned, has expanded to unequalled proportions, and now the enrollment of scholars is nearly 32,000, total number of districts schools 41, number of colored schools 6; and besides there are the Normal and High Schools and the departments in connection with the Polytechnic. All of our public school buildings, with perhaps a few exceptions, which will soon be abolished, are handsome, substantial structures, and form a prominent architectural feature in our city. In order, however, to fully appreciate the educational system of St. Louis, we must include also the universities and private schools and public libraries, which perform so important a work for the public. The aggregate, we think, fairly establishes the statement that our

facilities for public instruction and the distribution of knowledge are unequaled in proportion by any city of the world.

In December, 1855, a charter was obtained for the St. Louis Agricultural and Mechanical Association, and officers were appointed May 5th, 1856, as follows: J. Richard Barret, President; T. Grimsley, A. Harper and H. C. Hart, Vice Presidents; H. S. Turner, Treasurer; G. O. Kalb, Agent and Recording Secretary, and Oscar W. Collett, Corresponding Secretary. The present site of the Fair Grounds was purchased from Col. John O'Fallon, suitable buildings were erected, and in the fall of 1856 the first fair was held. It proved a most satisfactory success, and so the career of the association was fully inaugurated, and it has resulted in substantial and important benefits to St. Louis. The fairs were interrupted during the exciting and troublous years of the war, but recommenced in 1866, and each year since have increased in interest and attendance, and now transcend any event of the kind in the country. In fact they have ceased to be representative merely of the arts and industries, stock and agricultural products of one State: they are *National* exhibitions, with a premium list of great liberality; and if their future growth correspond with their past, their fame will extend beyond the boundaries of our country, and they will become international in character.

The formation of our system of street railroads corresponds in vigor and rapidity with the general growth of the city during this period. It was not until 1859 that the old omnibus lines began to give place to this improved method of local transportation, and we have now nine or ten separate and distinct lines in full operation, running between 160 and 170 cars and carrying a total of between seven and eight thousand passengers each day.

Among the important public structures erected we may mention the Custom House and Post Office in 1859, John Hogan being the first Post-master. This building is now inadequate to the wants of the city, and will soon doubtless be replaced by a magnificent structure in a different locality at a probable cost of between two and three millions of dollars.

In 1857 the site was purchased for the Southern Hotel, and the work of excavating was commenced in the following spring. The laying of masonry progressed steadily until December 4th, 1858, when it ceased temporarily, and having been covered to protect it from frost and rain it remained in this condition until April 14th, 1860, when work was resumed and continued until August 15th, 1861, when it was again suspended until June 17th, 1862. The splendid hotel was finally opened to the public September 6th, 1865, the lessees being Messrs. Laveille, Warner & Co., and the establishment representing in federal currency nearly one million and a half of dollars. The scale of the house is indicated by the following items: 17,000 yards of carpeting were required to carpet it, and 1,400 gas-burners to give it light; it has about 350 rooms with over 3,000 feet of corridor; the main one on each story is 257 feet long, with three others crossing it at right angles in length from about 80 to 200 feet. Other fine hotels came into being during the period of which we are speaking, and notwithstanding the destruction of the Lindell the hotel facilities of St. Louis correspond with the wants of the city, and already measures

are being discussed for largely increasing them. The Exchange, finished in 1859, is a handsome and imposing building, but will soon be supplanted by one more commensurate with our expanding commerce. The Polytechnic, finished in 1867, is now the stately headquarters of the public school department, while the handsome building of the Masonic Temple, of more recent construction, adds materially to the adornment of the same locality. The County Insane Asylum was commenced in 1865 and finished in April, 1869. It is situated about two miles west of Tower Grove, the justly celebrated place of Mr. Shaw, and the total cost was about \$900,000, including the furniture and the expense of boring the artesian well. The capacity of the institution is about 300 patients. The beautiful building of the new jail, now nearly completed, was commenced in 1869, and forms architecturally one of the most attractive public buildings in the city, and reflects great credit on the architect, Mr. Thomas Walsh. The total cost will be about \$550,000. The Court House was completed in 1862, and some particulars of its history and cost will be found elsewhere. In mentioning these buildings we have only selected a few instances illustrating the development of the city. Had we space to present a full statement of the various important edifices erected during the last twenty years the list would be lengthened almost indefinitely. Ranges of magnificent stores have been built along our principal streets, almost innumerable church edifices and hospitals, asylums, and other eleemosynary institutions, have arisen in various directions, and there are very few cities on the continent with a greater number of elegant private residences.

In this brief summary of the progress of St. Louis during the last two decades our object has been merely to indicate rather than describe, and we have passed over in silence the scenes and events of the war. From a thriving inland city she has advanced to the proud position of the metropolis of the West, whose architectural and commercial standing is a visible prophecy of her destiny as the future Babylon of the Old and New Worlds. Her past may well be a matter of pride to the people identified with her career, and whose intellectual and nerve force has made her what she is; but more so should be the glorious aggregate that now foreshadows the grander developments to come. Everything speaks of greatness. The mighty arches of steel soon to span our glorious river will form the greatest bridge ever built by man, and over which will pass the trade of more than half the world; our population steadily expands, and the human tide that flows in upon us under the magnetic influence of increasing prosperity seems to know no ebb, the mineral resources of our State have only inaugurated their development, and the smoke of the Carondelet iron furnaces by day and their lurid illumination by night, like the symbol of Divine protection in the olden time to the chosen people, guarantee blessings different but not less real in character, while the vast country westward is filling yearly with busy millions and all tributary to our city. Thus on all hands are promises for the future, and the energies of our people grow more active and concentrated. Is it strange, therefore, that with this unequalled spectacle of human growth before us, these thundering prophetic voices sounding round us, we should believe devoutly that our city is

destined to be the Capital of this Nation and the Future Great City of the Globe? It is not an ardent enthusiast that conceives the idea, but a phalanx of solid realities that enunciate it as the sure consummation of their combined power.

ST. LOUIS AND ITS CHARTERS.

The town of St. Louis was first incorporated on the 9th day of November, 1809, by the Court of Common Pleas for the District of St. Louis, upon the petition of two-thirds of the taxable inhabitants, under authority of an act of the Legislature of the Territory of Louisiana, passed June 18th, 1808, entitled "An act concerning towns in this Territory." The Judges constituting the Court were Silas Bent, President, and Bernard Pratte and Louis Labeaume, Associates. The charter granted by the Court was the only one under which the town existed until 1822, when it was incorporated as a city. It is to be found in the records of the Court in Book A, page 334, in the following words:

"On petition of sundry inhabitants of the town of St. Louis, praying so much of said town as is included in the following limits to be incorporated, to-wit: Beginning at Antoine Roy's mill on the banks of the Mississippi river, thence running sixty arpents west, thence south on said line of sixty arpents in the rear until the same comes to the Barriere Denoyer, thence due south until it comes to the Sugar Loaf, thence due east to the Mississippi, from thence by the Mississippi to the place first mentioned. The court having examined the said petition and finding that the same is signed by two-thirds of the taxable inhabitants residing in said town, order the same to be incorporated and the metes and bounds to be surveyed and marked and a plat thereof filed of record in the Clerk's office." David Delawney and Wm. C. Carr were appointed Commissioners to superintend the first election of five trustees in accordance with the law.

The next act in reference to incorporation is entitled "An act to incorporate the inhabitants of the town of St. Louis, approved December 9th, 1822." The limits stated in this act are as follows: Beginning at a point in the middle of the main channel of the Mississippi river, due east of the southern end of a bridge across Mill creek, at the lower end of the town of St. Louis: thence due west to a point at which the line of Seventh street extending southwardly will intersect the same; thence northwardly along the western side of Seventh street, and continuing in that course to a point due west of the northern side of Roy's tower; thence due east to the middle of the main channel of the river Mississippi; thence with the middle of the main channel of the said river to the beginning. By this act the town, bounded as above given, was "erected into a city" by the name of the city of St. Louis, and the inhabitants constituted a body politic and corporate under the name and style of the Mayor, Aldermen and Citizens of the City of St. Louis.

An act supplementary to that last mentioned was passed January 15, 1831, but without any alteration of the boundaries. On the 16th of January, 1833, an additional act was passed dividing the city into four wards. On the 26th of

February a new charter was passed by the Legislature, which reiterated the boundaries of the act of 1822, but contained new and more specific provisions for municipal government. On February 8, 1839, a new charter was again promulgated by the Legislature, which was much more elaborate than any of the preceding, being divided into articles, a formality not previously observed. This established the boundaries as follows: Beginning at a point in the middle of the main channel of the Mississippi river due east of the mouth of Mill creek (so called); thence due west to the mouth of said creek; thence up the center of the main channel of said creek to a point where the southern side of Rutgers street, produced, shall intersect the same; thence westwardly along the southern side of said street to the intersection of the same with the western line of Seventh street, produced; thence northwardly along the western line of Seventh street to the northern line of Biddle street; thence eastwardly with the northern line of Biddle street to the western line of Broadway, to a point where the southern boundary of survey number six hundred and seventy-one, produced, shall intersect the same; thence eastwardly along the southern boundary of said survey to the Mississippi river; thence due east to the middle of the main channel of the Mississippi river; thence down with the middle of the main channel of said river to the place of beginning.

On the 15th of February, 1841, an act amendatory to the foregoing again changed the boundaries as follows: Beginning at a point in the middle of the main channel of the river due east of the southeast corner of St. George, in St. Louis county; thence due west to the west line of Second Carondelet avenue; thence north with the west line of said avenue to the north line of Chouteau avenue; thence northwardly in a direct line to the mouth of Stony creek, above the then existing north line of the city; thence due east to the middle of the main channel of the Mississippi river, and thence south to the place of beginning.

On February 8, 1843, an act was approved entitled "An act to reduce the law incorporating the city of St. Louis and the several acts amendatory thereof, into one act, and to amend the same." This act did not change the city limits. Another act similar in title to that just mentioned was approved March 3, 1851, but it left the limits as last quoted.

Various supplementary and amendatory acts besides these mentioned were passed in reference to the city, but the next extension of the limits was made by an act specifically for that purpose, which was approved December 5, 1855. This act made the line of Keokuk street the southern boundary of the city, to a point six hundred and sixty feet west of Grand avenue; thence northwardly and parallel to the line of Grand or Lindell avenue at a distance of six hundred and sixty feet therefrom, until the line intersects the Bellefontaine road; thence northeast to the line dividing townships 45 and 46 north, range seven east; thence eastwardly with said line and in the same direction to the middle of the main channel of the Mississippi river; thence southwardly with the meanderings of said channel to place of beginning.

In 1866 the Legislature granted another charter for the city of St. Louis,

which divided the city into ten wards but left the boundaries unchanged. The act was approved March 19, 1866.

In 1867 another charter was obtained which added Carondelet to the city by extending the southern limits, but this extension did not go into effect until the first Tuesday in April, 1870. The city proper remained unchanged as to boundaries, and the extension authorized received the designation of the "New Limits." This charter divided the city into twelve wards. It remained unchanged until 1870, when an act was passed by the Legislature entitled "An act to revise the charter of the city of St. Louis and to extend the limits thereof." There was no actual extension of the limits made by this act, but the provisions of the previous charter in reference to the incorporation of Carondelet as part of the city were again enacted, it being provided that for the first five years not more than one-half of the rates of taxes authorized for the old limits should be levied on the property in the "new limits."

This is the existing charter of the city, but whether it will be so or not after the next session of the Legislature is quite problematical. Last winter an important bill was introduced in the House by Mr. W. H. Stone, of the St. Louis delegation, consolidating the governments of St. Louis city and county and extending the limits of the city to include the entire territory of St. Louis county. This bill elicited much attention and comment, but was not acted upon by the Legislature, and will probably come up again for consideration at the session next winter. In some of its details it may be imperfect, but the general extension of limits proposed is advisable and necessary in anticipation of the destined development of the city. Municipal growth is not circumscribed by the invisible lines of corporate authority, but it should not be even slightly retarded by the want of appropriate legislation.

HISTORY OF THE COURT HOUSE.

The Court House building which towers above our city, and gives to it, when viewed from a little distance, an aspect like London with its St. Paul's, is one of the most massive and imposing architectural structures of the kind in the country, and the following historical particulars respecting it will be interesting to our readers:

On the 14th of December, 1822, an act was approved entitled "An act concerning a Court House and Jail in the county of St. Louis," and, in accordance with its provisions, Thomas Sappington of Gravois, Ludwell Bacon of Bonhomme, Robt. Quarles of St. Ferdinand, and Pierre Chouteau, Jr., and Wm. Carr Lane, of the town of St. Louis, were appointed Commissioners to select a proper site within the town of St. Louis, whereon to erect a Court House for said county. The Commissioners were also authorized to receive proposals from all persons willing to make donations of lands for the purpose named, and to accept any donation that might seem to them most beneficial to the county; and to cause a deed of conveyance to be executed, whereby the land so donated should be conveyed to the Justices of the County Court and their successors in office. Under the authority conveyed in this act, the Commis-

sioners named selected the site now occupied by the Court House, which was donated for the purpose by the proprietors, John B. C. Lucas and Auguste Chouteau; the date of the report of the Commissioners being August 25, 1823, It is stated that under the old *regime*, the whipping-post was placed at a point on the site now occupied by the Court House. The first step towards the erection of the building was taken by the County Court on the 9th of November, 1825, the Justices then being Joseph V. Garnier, Peter Ferguson, and Francis Nash; when the sum of \$7,000 was appropriated for the purpose, and Alexander Stuart was appointed Commissioner to superintend the work. On the 7th of February, 1826, an additional appropriation in the sum of \$5,000 was made, and on the 9th of the same month Mr. Stuart submitted plans for the building, which were approved, the estimate of the cost being \$12,000. Some difficulty appears to have occurred relative to the plans adopted, for on May 1, 1826, a plan prepared by Messrs. Morton & Laveille was approved, and \$2,000 additional was appropriated. Stuart's plan was apparently thrown overboard, and the contract for the erection was awarded to Joseph C. Laveille and George Morton, for \$14,000, and bears date May 26, 1826. At a meeting of the Court, held on July 26th of the same year, Henry S. Geyer was appointed Commissioner to superintend the building of the Court House, vice Alexander Stuart, resigned. This building was completed on the 10th of August, 1833, the entire cost being \$14,416.16

In June, 1838, the public business had so increased, and the necessity for greater accommodations was so evident, that the court asked for proposals for clerks' offices on the southwest corner of the square (Fifth and Market streets), to be 132 feet long by 36 feet in width. In September, 1838, another public notice was given, and an offer of \$100 for the best plan for a building on the Public Square, either adjoining the Court House or adjacent thereto. A plan submitted by Henry Singleton on July 8th, 1839, was adopted, and the designer was appointed architect and superintendent. This was really the commencement of the present imposing structure, and the first contract for work was made by Mr. Singleton with Joseph Foster, for the carpenter work, on August 12, 1839, and in April, 1842, a contract for the cut-stone work of the rotunda was awarded to J. H. Hall. The work progressed slowly until 1851, when Robert S. Mitchell was appointed architect and superintendent, and he immediately proceeded to tear down the old building, which stood where the east wing was to be erected, and in October, 1852, contracted with Mr. Bernard Crickard for the cut-stone work for the wing. It was subsequently decided by the Court to have the north and south wings, and on the 28th of May, 1853, Mr. Mitchell contracted with Mr. Crickard for the cut-stone work of the south wing, and in July, 1853, for the six stone columns in the portico of the east wing. In May, 1857, the court superseded Mr. Mitchell and appointed Thomas D. P. Lanham to the office at a remuneration of four per cent. on the amount of work done under his supervision. The County Court was abolished by the Legislature, and on the first Monday in August, 1859, the Board of County Commissioners were elected, and on the 21st of September following the Board declared the office of architect and superintendent vacant, and the day after

appointed William Rumbold to the office at a salary of \$125 per month. The work from this period progressed with steadiness. The design for the dome prepared by Mr. Lanham was rejected, and the wrought-iron dome devised by Mr. Rumbold was adopted, having been carefully tested, and the contract for the erection awarded to Mr. James McPheeters. Without further pursuing the different steps in the progress of the work, we will state that the splendid building, after the lapse of a quarter of a century from the time of its commencement, was pronounced completed at the beginning of July, 1862.

The cost of the work was as follows:

Cut-stone work.....	\$383,647 05
Other stone work.....	48,455 91
Iron work.....	151,342 22
Brick and material.....	71,115 23
Plastering.....	21,054 65
Carpentry.....	146,607 19
Painting and glazing.....	21,650 13
Roofing.....	23,825 49
Sundries, labor, material, etc.....	288,329 71
Architect and superintendent.....	43,844 33
Total cost.....	\$1,199,871 91

EXECUTIVE OFFICERS OF ST. LOUIS SINCE 1810.

1810	Auguste Chouteau.....Chairman.	1841	John D. Daggett.....Mayor.
1811	Charles Gratiot.....“	1842	George Maguire.....“
1812	Charles Gratiot.....“	1843	John M. Wimer.....“
1813	Charles Gratiot.....“	1844	Bernard Pratte.....“
1814	Clement B. Penrose.....“	1845	Bernard Pratte.....“
1815	Elijah Beebe.....“	1846	Peter G. Camden.....“
1816	Elijah Beebe.....“	1847	Bryan Mullanphy.....“
1817	Elijah Beebe.....“	1848	John M. Krum.....“
1818	Thomas F. Riddick.....“	1849	James B. Barry.....“
1819	Peter Ferguson.....“	1850	Luther M. Kennett.....“
1820	Pierre Chouteau, Sen.....“	1851	Luther M. Kennett.....“
1821	Pierre Chouteau, Sen.....“	1852	Luther M. Kennett.....“
1822	Thomas McKnight.....“	1853	John How.....“
1823	William Carr Lane.....Mayor.	1854	John How.....“
1824	William Carr Lane.....“	1855	Washington King.....“
1825	William Carr Lane.....“	1856	John How.....“
1826	William Carr Lane.....“	1857	John M. Wimer.....“
1827	William Carr Lane.....“	1858	Oliver D. Filley.....“
1828	William Carr Lane.....“	1859	Oliver D. Filley.....“
1829	Daniel D. Page.....“	1860	Oliver D. Filley.....“
1830	Daniel D. Page.....“	1861	Daniel G. Taylor.....“
1831	Daniel D. Page.....“	1862	Daniel G. Taylor.....“
1832	Daniel D. Page.....“	1863	Chauncey I. Filley.....“
1833	*Samuel Merry.....“	1864	James S. Thomas.....“
1834	John W. Johnston.....“	1865	James S. Thomas.....“
1835	John F. Darby.....“	1866	James S. Thomas.....“
1836	John F. Darby.....“	1867	James S. Thomas.....“
1837	John F. Darby.....“	1868	James S. Thomas.....“
1838	William Carr Lane.....“	1869	Nathan Cole.....“
1839	William Carr Lane.....“	1870	Nathan Cole.....“
1840	John F. Darby.....“	1871	Joseph Brown.....“

*Disqualified in consequence of holding office under the general government. John W. Johnston elected Mayor in his stead.

FUTURE GREAT CITY.

THE ARGUMENT.

Great cities grow up in nations as the mature offspring of well-directed, civil and commercial agencies, and in their advanced development they become vital organs in the world's government and civilization, performing the highest functions of industrial and social life on the earth. They grow up where human faculties and natural advantages are most effective. They have a part in the grand march of the human race, peculiar to themselves, in marking the progress of mankind in arts, commerce and civilization; and they embellish history with its richest pages of learning, and impress on the mind of the scholar and the student the profoundest lessons of the rise and fall of nations. They have formed in all ages the great centers of industrial, artistic and intellectual life, from which mighty outgrowths of civilization have expanded. In short, they are the mightiest works of man. And whether we view them wrapped in the flames of the conqueror, and surrounded with millions of earnest hearts, yielding in despair to the wreck of fortune and life at the fading away of expiring glory, or the sinking of a nation into oblivion; or whether we contemplate them in the full vigor of prosperity, with steeples piercing the very heavens, with royal palaces, gilded halls, and rich displays of wealth and learning, they are the same ever wonderful objects of man's creation, ever impressing with profoundest conviction lessons of human greatness and human glory. Even in their decay they have been able to wrestle with all human time and resist oblivion. We have only to go with Volney through the Ruins of Empire; to trace the climbing path of man, from his first appearance on the fields of history to the present day, by the evidences we find along his pathway in the ruins of the great cities, the creation of his own hands. The lessons of magnitude and durability which great cities teach may be more clearly realized in the following eloquent passage from a lecture of Louis Kossuth, delivered in New York City:

"How wonderful! What a present and what a future yet! Future? Then let me stop at this mysterious word, the veil of unrevealed eternity.

"The shadow of that dark word passed across my mind, and, amid the bustle of this gigantic bee-hive, there I stood with meditation alone.

"And the spirit of the immovable past rose before my eyes, unfolding the picture-rolls of vanished greatness, and of the fragility of human things.

"And among their dissolving views there I saw the scorched soil of Africa, and upon that soil, Thebes, with its hundred gates, more splendid than the most splendid of all the existing cities of the world—Thebes, the pride of old

Egypt, the first metropolis of arts and sciences, and the mysterious cradle of so many doctrines, which still rule mankind in different shapes, though it has long forgotten their source.

"There I saw Syria, with its hundred cities; every city a nation, and every nation with an empire's might. Baalbec, with its gigantic temples, the very ruins of which baffle the imagination of man, as they stand like mountains of carved rocks in the desert, where, for hundred of miles, not a stone is to be found, and no river flows, offering its tolerant back to carry a mountain's weight upon. And yet there they stood, those gigantic ruins; and as we glance at them with astonishment, though we have mastered the mysterious elements of nature, and know the combination of levers, and how to catch the lightning, and how to command the power of steam and compressed air, and how to write with the burning fluid out of which the thunderbolt is forged, and how to dive to the bottom of the ocean, and how to rise up to the sky, cities like New York dwindle to the modest proportion of a child's toy, so that we are tempted to take the nice little thing up on the nail of our thumb, as Micromegas did with the man of wax.

"Though we know all this, and many things else, still, looking at the times of Baalbec, we cannot forbear to ask what people of giants was that which could do what neither the puny efforts of our skill, nor the ravaging hand of unrelenting time, can undo through thousand of years.

"And then I saw the dissolving picture of Nineveh, with its ramparts now covered with mountains of sand, where Layard is digging up colossal winged bulls, large as a mountain, and yet carved with the nicety of a cameo; and then Babylon, with its beautiful walls; and Jerusalem, with its unequaled temples; Tyrus, with its countless fleets; Arad, with its wharves; and Sidon, with its labyrinth of work-shops and factories; and Ascalon, and Gaza, and Beyrout, and, further off, Persepolis, with its world of palaces."

The first great cities of the world were built by a race of men inferior to those which now form the dominant civilization of the earth, yet there are many ruins of a mold superior, both in greatness and mechanical skill, to those which belong to the cities of our own day, as found in the marble solitudes of Palmyra and the sand-buried cities of Egypt. It is true, however, that ancient grandeur grew out of a system of idolatry and serf-labor, controlled by a selfish despot or a blind priesthood, which compelled a useless display of greatness in most public improvements. In our age, labor is directed more by practical wisdom than of old, which creates the useful more than the ornamental; hence we have the Crystal Palace instead of the Pyramids.

With this brief but sufficient statement of the wonderful character, and lesson, which great cities have afforded along the career of the human race, let us turn and look beyond and inquire: "Where will grow up the future great city of the world?" Let us examine, and if possible ascertain among what people, in what nation, on what continent, the great city of the world is yet to be?

At the very outset of this inquiry it is necessary to clearly comprehend a few underlying facts connected with the cities of the past and those now in existence, and note the influence of the more important arts and sciences upon

the present intellectual and industrial interests of civilized men, and if possible determine the tendency of the world's civilization towards the unfolding future.

It must be true in the case of great cities, as in the development of any other department of human interest, that their location and growth are directed and controlled by certain fundamental facts and principles, local and general in their character. And that with a knowledge and application of those local and fundamental facts and general principles, the investigator can be easily carried into the future, and not only the great cities and their locations be pointed out but also the place where THE FUTURE GREAT CITY of the world will grow up. My task is, now, to point out those fundamental, local facts and general principles, and by their application, to nature and civilization, determine where the future great city of the world is destined to grow up.

GENERAL PRINCIPLES.

Under this head I lay down six general principles, two of which have ever been all-controlling, in the production of great cities. The third is substantially new and local to America and must exercise a controlling influence on this continent.

I. I lay it down as a general principle, that the highest civilization, the greatest concentration of wealth and the growth of the greatest cities, have been attained within an isothermal belt or zone of equal temperature, which encircles the earth in the north temperate zone.

II. That all the great cities of the world have grown up, near to, the north and south, of the line of an obstructed navigation in mid winter.

III. That human power is organized to its fullest capacity where the productive power of a continent is greatest.

IV. That nearly all the great cities of the world have been built upon rivers.

V. That the arts and sciences, do more, to increase population and promote the growth, of cities, on the interior lands, than upon the sea board or coast lands.

VI. That to modern civilization, domestic transportation, by water and by rail, is more valuable to nations of great territorial extent, than ocean navigation.

THE ARGUMENTS DEDUCED FROM OUR EIGHT GENERAL PRINCIPLES.

Having laid down our eight general principles, most of which are essential to the production of a great city, any where on this globe, I now proceed to elucidate the truth and importance of each of them, and ascertain, if possible, if they will not, in time, ultimate, upon this continent a greater city, than has yet been built by man. I will even go beyond and by a more exhaustive elucidation and a closer application of the truths and facts, which I shall bring to bear, fix the location and determine the growth of the future great city of the world.

THE FIRST GENERAL PRINCIPLE ELUCIDATED.

GENERAL PRINCIPLE. I. *That the highest civilization, the greatest concentration of wealth, and the growth of the greatest cities have been attained and developed, within an isothermal belt or zone of equal temperature, which encircles the earth in the north temperate zone. The existence of an isothermal zone, or belt of equal temperature, surrounding the northern hemisphere was first discovered by Humboldt.*

He first called scientific attention to isothermal lines, or lines of equal temperature, which encircle the earth in the north temperate zone. And minute investigations established the fact that the human race had since creation's dawn been moving westward, as if directed or impelled by a kind of instinct, within a zodiac or zone a few degrees wide, having for its axis a line of equal temperature. "During antiquity this zodiac was narrow; it never expanded beyond the North African shore, nor beyond the Pontic Sea, the Danube, and the Rhine. Along this narrow belt civilization planted its system, from Oriental Asia to the western extremity of Europe, with more or less perfect development. Modern times have recently seen it widen to embrace the region of the Baltic Sea. In America it starts with its broad front from Cuba to Hudson's Bay. As in all previous times, it advances along a line central to these extremes, in the densest form and with the greatest celerity. It reveals to the world this shining fact, that along it civilization has traveled, as by an inevitable instinct of nature, since creation's dawn. From this line has radiated intelligence of mind from the north and to the south." It is the zodiac of empire.

It is a noteworthy observation of Dr. Draper, in his work on the Civil War in America, that within a zone a few degrees wide, having for its axis the January isothermal line of forty-one degrees, all great men in Europe and Asia have appeared. He might have added, with equal truth, that within the same zone have existed all those great cities which have exerted a powerful influence upon the world's history, as centers of civilization and intellectual progress. The same inexorable but subtle law of climate which makes greatness in the individual unattainable in a temperature hotter or colder than a certain golden mean, affects in like manner, with even more certainty, the development of those concentrations of the intellect of man which we find in great cities. If the temperature is too cold, the sluggish torpor of the intellectual and physical nature precludes the highest development; if the temperature is too hot, the fiery fickleness of nature which warm climates produce in the individual, is typical of the swift and tropical growth and sudden and severe decay and decline of cities exposed to the same all-powerful influence. Beyond that zone of moderate temperature, the human life resembles more closely that of the animal, as it is forced to combat with extremes of cold or to submit to extremes of heat; but within that zone the highest intellectual activity and culture are displayed. Nations and cities have arrayed themselves along its grand pathway, from Peking, in China, to St. Louis, in America.

——“Through the ages one unceasing purpose runs,
And the thoughts of men are widened with the process of the sun.”—

Herein, then, lies the primal law that essentially controls and directs the movements of man upon this globe.

Within this belt has already been embraced more than three-fourths of the world's civilization, and now about 850,000,000 people. It is along this belt that the processions of nations, in time, have moved forward, with reason and order, “in a pre-determined, a solemn march, in which all have joined; ever moving and ever resistlessly advancing, encountering and enduring an inevitable succession of events.”

But granting that the human race, with all its freight of commerce, its barbarism and civilization, its arms, and arts, has been moving westward since the beginning of time along this zodiac of empire, through pestilence and prosperity, across seas and over continents, like a mighty caravan gone forth to make the circuit of the globe, will not the same inevitable cause that wrested human power from the cities and nations of the ancients and vested it for a time in the city of the Cæsars, and thence moved it to the city of London, cross the Atlantic Ocean, and with accumulated strength and intelligence, organize human power upon the North American continent, in a greater degree than has yet been known to mankind?

Must we not assume, that somewhere in time, this movement of the human race, in this zodiac of empire, will be arrested in its westward career, and man cease his long march around the earth, and seek the goal of his ambition on the American continent? Is it not impossible for the movement to cross the Pacific Ocean to the inferior races of Asia? And is it not in the very nature of things that North America is to be the battle-ground where the great problems of the world are to be solved, and man attain his full development on the planet? Is not this the full and free expression of every enlightened American? There is no other conclusion to which civilization is tending. The civil conquest of this continent completes the circuit of the globe. It unites the isothermal axis at the east and the west, and decides the victory of civilized men over the empire of nature.

But granting that human power will still move forward until it crosses the Atlantic Ocean, and that it will be arrested upon the American continent, there still arises in the discussion another important question: as to whether it will reach and make a lodgment upon the Pacific coast, or will be organized in the central plain of the continent.

It requires but a simple observation, a simple glance at the productive character of the continent, to settle this question. On the eastern declivity of the continent, is embraced a little more than one-seventh of our territorial possessions. On the western declivity is embraced, almost one-third of our domain. The interior plain or Mississippi basin contains 2,455,000 square miles, infinitely transcending, in productive energies, either of the continental slopes and of any other portion of the globe.

In territorial extent this grand valley surpasses in area all other formations of the kind on the globe, and is much greater than the combined area of

the Atlantic and Pacific slopes. No other continent has so great an area of agricultural lands as it, and none so rich in natural wealth. Its soil in richness and extent is beyond all comparison. Its coal-fields and iron deposits are by far the greatest and the richest in the world. "Its river navigation," said Benton, "is the most wonderful on the globe, and, since the application of steam power to the propulsion of vessels, possesses the essential qualities of open navigation. Speed, distance, cheapness, magnitude of cargoes, are all there, and without the perils of the sea from storms and enemies. The steam-boat is the ship of the river, and finds in the Mississippi and its tributaries the amplest theatre for the diffusion and the display of its power. Wonderful river! connected with seas by the head and by the mouth, stretching its arms toward the Atlantic and the Pacific, lying in a valley which is a valley from the Gulf of Mexico to Hudson's Bay."

The adaptability of the Mississippi Valley for building railroads is supreme over all other lands. Its climate is in the highest degree fitted for man, and the commerce afforded by its fields and factories and foundries will yet flow to the markets of every country. Even when looking but dimly upon that grand domain, De Toqueville said that "the Mississippi Valley is, upon the whole, the most magnificent dwelling-place prepared by God for man's abode;" and Charles Sumner said "the Mississippi Valley speaks for itself as man cannot speak." "About the noblest work," said Thomas Hughes, "that man can do is the development of this magnificent continent."

Since these things are so; since the wisest of men have testified; since God has made that great valley, from Hudson's Bay to the Gulf, far the grandest theater for man's abode upon the planet, and fitted it upon each side with the great galleries—the Atlantic and Pacific slopes—must we not conclude that the center of human power, in its westward movement, will be arrested in the central plain of the continent, where are to be found the greatest supply of the productive energies of the earth? In short, it must be in the grand valley, where the two waves of civilization—one rolling in from the Celestial Empire, and the other from the land of Alfred and Charlemagne—will meet and commingle together in one great swelling tide of humanity, in the land of Hiawatha.

Having briefly considered the first general principle laid down for the discussion, and indicated its all-important truth, how that the great cities of the world have, in time, succeeded each other along the highway of nations, and how the power, wealth and wisdom that once ruled in Troy, Athens, Carthage, Rome, Genoa and Venice is now, in the still onward, and westward, movement of the great Family of man, represented by the city of London; the precursor of the final great city of the world—will in time cross the Atlantic Ocean, and be arrested in the central plain of North America where in less than one hundred years, the great city of the future will grow up, let us pass to a consideration of the general proposition.

II. That all the great cities of the world have grown up near to the north and south, of the line of unobstructed navigation in mid-winter.

By the line of unobstructed navigation in mid-winter I mean that line that

bounds the limits of freezing so as to obstruct by navigation with ice. Such a line drawn around the earth, would pass by or near to Cairo, at the junction of the Ohio and Mississippi rivers. And to the north of it would be much of the internal navigation of the great basin. It is upon such a line, and near to it north and south, that all the great cities have and will grow up on the globe.

The truth of this must be evident, to every person who will consider the subject for one moment.

Climate every where upon the earth, controls vegetation. Every where in the pursuit of toil and gain, man is compelled to combat extremes of heat and cold, and the severer the conflict, the greater the impediment to his success and progress; hence it is along and adjacent to that line midway the extremes of heat and cold, that his successes must be greatest, that his achievements must be most complete. Especially must this be true, south of the unobstructed line of navigation. For it cannot be denied that any impediments to the free exchange of commerce, interposed, by cold, on land or water, is more expensive to the people belonging to the regions where the climate interferes, than to those regions of country which are comparatively free from embarrassments interposed by cold weather, thus affording no impediment to the ready exchange of commerce. Therefore, the people south of such a line must possess advantages for the promotion of prosperity and wealth, over those regions where snow and ice and the rigors of the climate interpose unavoidable obstacles. Still further, the climatic boundary line, to human advancements, has ever been to the north and not to the south. The infinite Father has set bounds to the north that he has not to the south, and every race and every nation has submissively conformed to the dictation of providence, and made the great battle ground for arms and arts south of the axis of the zodiac of empire instead of north of it. Thus proving the greater advantages for men and cities, south of the unobstructed line of navigation, than to the north of it.

But let us pass to our next general principle.

III. That nearly all the great cities of the world have been built upon rivers, whether in the interior or near the ocean's edge: such as Babylon, on the Euphrates; Thebes, on the Nile; Nineveh, on the Tigris; Constantinople, on the Bosphorus; Rome, on the Tiber; Paris, on the Seine; London, on the Thames; New York, on the Hudson; Cincinnati, on the Ohio; and St. Louis, on the Mississippi; while Carthage, St. Petersburg, and Chicago belong to interior waters, and Palmyra and the City of Mexico to the interior country.

That there is an important reason why cities are built upon rivers, must be evident to every reflecting man. All commercial transactions are leased upon transportation—the facilities for the easy and cheap exchange and transportation of products, merchandise and peoples, to and from commercial centers. Rivers for navigation and for the abundant supply of water for domestic purposes, have afforded natural advantages for interior and foreign commerce, that cannot be supplied without them.

Not even the new agency, the railway—transcends in the importance of usefulness the natural advantages afforded to the cities, by the navigable rivers

They only contribute to give importance to those advantages, by gathering up and concentrating the products of the land at given points on the great rivers. Hence the advantages afforded to great cities by great rivers will ever remain paramount to localities on the shores of the oceans and lakes; while upon them must ever grow the great cities of the world. Passing to our next general principle.

IV. That the greatest human power will grow up and become organized, where the productive power of a continent is greatest.

The truth of this principle is found in the fact that all man's material interests, upon the land, depend upon the material wealth, or productive power of the land; viz: the rich soils, the timber, the metals, the domestic navigation &c., &c., essential to the uses and wants of man. This truth is so plain and so great, that it requires no argument for its demonstration.

It is true that this general principle, in its application to the production of great cities has more force in North America, than in any other portion of the world.

Neither the cities of Asia, Africa nor Europe, have depended so much, for their immediate prosperity and growth, upon the productive energies of those continents, as do and will, the cities of North America.

Here the whole tendency of industrial civilization is to utilize the labors and natural resources of the country, in an aggregated form, more than in any other land. And though the results are not yet so over-shadowing in their appearance, the principle has been vigorously applied. And with the superior advantages, which **this land** affords, for the use of the railway, every succeeding year added to **our national** life must bring still stronger evidence, to **prove** that in North America, the great city is destined to be in the center of the productive power of the country, where the center of human power must grow up.

Against the truth and application of this general principle there can be no adverse argument; hence it affords the basis for the strongest possible argument in favor of the future great city of the world, growing up in North America. From that we pass to our next general principle.

V. That the arts and sciences, contribute more, to increase population and promote the growth of cities upon the inland of a continent, than upon the sea-board or coast lands. Steam engines, labor-saving machines, books, the value and use of metals, government, the enforcement of laws, and other means of self-protection—all have tended more to make the people of the interior more numerous, powerful and wealthy than those who dwell along the shores of the ocean.

The truth of this is **found** in the fact, that man's relations and interests **are** with the land and its natural resources. With these the arts and sciences **have** to deal, and where **the greatest** opportunities combine with the greatest **resources**, the arts and sciences contribute most to the welfare of man and **to** the building up of great cities.

Our sixth and last fundamental principle is:

VI. That to modern civilization, domestic transportation by water, and **by**

rail, is more valuable to nations of great territorial extent, than ocean transportation. While this fundamental principle, is correct as a general truth, it is intimately blended and belongs to and depends upon, the use and application of the last two preceding general principles. The arts and sciences contributing, only to man's happiness and welfare, where their application can be made in the most practical way.

Having thus defined the general principles, in nature and in civilization, which produce the great cities of the world, and having laid down these principles as a basis upon which to found the argument and determine the position of the future great city, I will now proceed at once to the discussion.

Assuming that the six fundamental principles just laid down are true, and that by a proper understanding of them, it is possible to determine when and where the future great city of the world is destined to grow up on the earth, I shall at the very out-set of the discussion make the bold declaration, that the great city of the future, is to grow up in North America, and that Saint Louis is to be that city. The elaboration of our first fundamental principle demonstrates beyond question, that the center of human power moving westward, in the zodiac of empire must cross the Atlantic Ocean and make a lodgement in North America, and that too where the center of human power is fixed, the great city must grow up.

It must grow up near the axis of that great belt of empire, near the unobstructed line of water navigation in mid-winter; on the great river where climates cannot rudely interpose obstacles to commerce and navigation. This being true, it is a fact of no little importance, that the very axis of the zone of empire—the center of equilibrium between excess of heat and cold—the January isothermal line of forty-one degrees—passes nearer to the city of St. Louis, than to any other considerable city on this continent! Close to that same isothermal line lie London, Paris, Rome, Constantinople and Pekin; north of it lie New York, Philadelphia and Chicago, and south of it lies San Francisco. Thus favored in climate, lying in the very center of that belt of intellectual activity, beyond which neither great man nor great city has yet appeared, St. Louis may, with reason, be expected to attain the highest rank, if other conditions favor.

Thus we see that St. Louis is not only situated near to the axis of the belt of empire, but also near to the line of unobstructed winter navigation which, in addition, being supremely favored, as I shall show by the other fundamental principles laid down at the basis of this discussion, it only remains to support those principles by local and general facts, to establish the position and certainty of the future great city. Then rising from principles to essential necessities for the maintainance of human life, we find that the growth of a city is analogous to the growth of a human being, and that there are certain prime necessities for the maintainance of human life; the abundance of which stimulates health and the rapid increase of population, and consequently stimulates the growth of great cities in proportion to the cheapness and abundance of the supply. These prime necessities are first, food; second, clothing; third, shelter.

There can be no civilized life without all of these; and as they are the products of labor and skill, where they can be produced in the greatest abundance and used to the greatest advantage, and the most extensively, will almost certainly be the place where the center of population will be fixed on this continent and where the great city will grow up—where our problem will be solved. Added to these should be ample facilities for the intercommunion of the people, one with another, and for the ready exchange of commodities forming foreign and domestic commerce. These may be enumerated as good roads, railways, and navigable channels, with attendant cheap freights.

That St. Louis occupies a geographical position, central to the productive energies of the continent there can be no question of doubt. In fact no city on the globe is so well favored with the resources necessary to produce food, and the materials out of which clothing and houses are made.

To establish the truth of this statement we have only to examine, in a cursory manner, the facts—their continental importance as Providence has bounteously provided them on every hand, throughout the length and breadth of the great valley of the Mississippi. Let us consider them briefly.

Leaving the Atlantic seaboard and coming west of the Appalachian mountains, we at once enter the domain of the Mississippi Valley, which comprises an area of 2,445,000 square miles, and extends through thirty degrees of longitude and twenty-three degrees of latitude.

The Mississippi Valley embraces, within its vast extent, a variety of climates, an area of rich soil, an extent of river navigation, a supply of mineral wealth and a configuration of surface, equaled nowhere else on this globe.

Neither Asia, Africa, Europe nor South America can boast of a valley so vast in extent, and so bountifully supplied with natural wealth and natural advantages, essential to the industrial and commercial progress of man.

To satisfy the reader of the truth of these statements, a few general facts are submitted :

RIVERS OF ASIA.

YANGTSE—Length, 3,200 miles; navigable, 900 to 1,500 miles; area drained, 740,000 square miles.

OBI—Length, 2,530 miles; navigable, 900 miles; area drained, 1,357,000 square miles.

RIVERS OF AFRICA.

NILE—Length, 3,600 miles; navigation unknown; area drained, 520,000 square miles.

NIGER—Length, 2,500 miles; navigable, 700 miles; area drained, unknown.

RIVERS OF EUROPE.

VOLGA—Length, 2,150 miles; navigable, 1,800 miles; area drained, 400,000 square miles.

DANUBE—Length, 1,700 miles; navigable, 1,500 miles; area drained, 250,000 square miles.

RIVERS OF SOUTH AMERICA.

AMAZON—Length, 4,000 miles; navigable, 3,662 miles; area drained, 2,000,000 square miles.

LAPLATA—Length, 2,550 miles; navigable, 1,250 miles; area drained, 1,250,000 square miles.

RIVERS OF NORTH AMERICA.

MISSISSIPPI—Length, 2,616 miles; navigable, 2,200 miles; area drained, 2,455,350 square miles.

MISSOURI—Length, 2,908 miles; navigable, 2,000 miles; area drained, 518,000 square miles.

The above statement of the length, navigable depth and area drained by the ten longest rivers in the world, settles the question of superiority in favor of the great river of North America—the Mississippi, and decides the question of size between the great basins.

Although geographical science long since established the fact that the Amazon was the king of rivers, modern and minute investigation, has proven the basin of the Mississippi, as the above figures show, to surpass in extent any other formation of the kind on the globe. It is true that Humboldt estimated the area drained by the Amazon to be 2,800,000 square miles, but more recent authorities place the number below that of the Mississippi basin. Not only do the facts demonstrate the Mississippi basin to be larger than that of the Amazon, but the configuration of the two parts of the American continent is quite different, that of North America presenting three vast interior plains, comprising more than one-half of its populable area; that of South America presenting a configuration far more mountainous, and devoid of great plains similar to those forming the great basin of the Mississippi.

In the Mississippi Valley, which is still new in its development, there are already many large and flourishing cities, each expecting, in the future, to be greater than the others. First among these stand Chicago, Cincinnati, St. Louis, and New Orleans—four cities destined, at no distant day, to surpass, in wealth and population, the four cities of the Atlantic seaboard—Boston, New York, Philadelphia, and Baltimore. Assuming, then, that the future great city is to be in the Mississippi Valley, we are to ascertain which of the four cities it is to be, or whether some new and more prosperous rival will present itself for that great achievement. As the great city is to be in the future, we must view it as the growth of the well-developed resources of our country; and, all things being considered, it is but just to say that, inasmuch as it will be an organism of human power, it will grow up in or near the center of the productive power of the Continent. That Chicago, Cincinnati, St. Louis, and New Orleans have each many natural advantages, there can be no question. There is, however, this difference: the area of surrounding country, capable of min-

istering to the wants of the people and supplying the trade of a city, is broken, in the case of New Orleans, by the Gulf of Mexico, Lake Pontchartrain and by regions of swamps. In the case of Chicago, it is diminished one-third by Lake Michigan; while Cincinnati and St. Louis both have around them unbroken and uninterrupted areas of rich and productive lands, each capable of sustaining a large population. But if it be asked, to which of these cities belong the greatest advantages must we not answer, it is the one nearest the center of the productive power of the Continent? Most certainly, for there will grow up the human power. And is not this center St. Louis? We have only to appeal to facts to establish the superior natural advantages of St. Louis over any other city on the Continent.

But, before we enter upon a discussion of the productive powers of the Continent, let us look for one moment at the elements of human want upon which civilization is founded: and this brings us back to a consideration of our auxiliary and essential requisites to our six fundamental facts. Under all circumstances, and in every condition of life, in country or clime, the first and greatest necessity of man is food; and, a civilization and an industry universally founded upon the principle "for value received," it is incontrovertibly true that, in that part of the country where the most food can be produced and supplied at the cheapest rates to the consumers, there will be an essential requisite to encourage and sustain a dense population. Then, without entering into a detailed investigation of the advantages afforded to Chicago, Cincinnati, and New Orleans, for obtaining an all-sufficient supply of cheap food, we shall at once assume that St. Louis is central to a better and greater food-producing area or country, than either one or the other three cities; and that no man can disprove the assumption, is most certainly true.

St. Louis is, substantially, the geographical center of this great valley, which, as we have already seen, contains an area of 2,445,000 square miles, and will, in the mature development of the capacity of its soil, control at least, the products of 1,000,000 square miles. That we may infer, approximately, the capacity of the more central portions of this valley for food producing purposes, we call to the calculation an estimate, made by the Agricultural Bureau, of the cereal products of the North-west for the next four decades:

Year.	Bushels.
1870.....	762,200,000
1880.....	1,219,520,000
1890.....	1,951,232,000
1900.....	3,121,970,000

We consume in this country an average of about five bushels of wheat to the inhabitant, but, if necessary, can get along with something less, as we have many substitutes, such as corn, rye and buckwheat. A low estimate will show that our population will be in:

Year.	Population.
1870.....	42,000,000
1880.....	56,000,000
1890.....	77,000,900
1900.....	100,000,000

Accordingly, we can use for home consumption alone of wheat in :

Year.	Bushels.
1870.....	210,000,000
1880.....	280,000,000
1890.....	385,000,000
1900.....	500,000,000

This calculation is made for Illinois, Missouri, Iowa, Wisconsin and Minnesota; and by taking into the account Nebraska, Kansas, the Indian Territory, and Arkansas, four additional States which naturally belong to the account of this argument, we at once swell the amount of food for the next three decades to a sufficiency to supply hundreds of millions of human beings, at as cheap rates as good soil and human skill and labor can produce it.

Nor do these States comprise half of the food-producing area of the Valley of the Mississippi. Other large and fertile States, more eastern, and southern, and western—Indiana, Ohio, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, Kansas and Nebraska—do now, and will continue to, contribute largely to the sum total of the food produced in the Valley States. And when we consider that less than one-fifth of the entire products of the whole country in 1860 was exported to foreign countries, thus leaving four-fifths for exchange in domestic commerce between the States, and that such is the industrial and commercial tendency of our people to a constant proportional increase of our domestic over our foreign exchange, we see an inevitable tendency in our people to concentrate industrially and numerically in the interior of the Continent. And when we take into the account that not more than eighteen per cent. of the soil of the best States of this valley is under cultivation, we are still more amazed at the thought of what the future will produce, when the whole shall have been brought under a high state of improved culture. Then the food-producing capacity of this valley will be ample to supply more people than now occupy the entire globe, and with the superior advantages of domestic navigation that St. Louis has over any of the valley cities, and the still additional advantages which she will have in railway communications, and her proximity to rich soils, where can a people be supplied with more and cheaper food than here? Not only are the superior advantages afforded for the production of an abundance of cheap corn and wheat for food, but also for the growth of rye, oats, barley, sugar and all kinds of vegetables and fruits essentially necessary for the wants of those who inhabit the land. In addition to the food taken direct from the soil, St. Louis is better situated than the other three cities for being amply supplied, at the lowest possible rates, with the best quality of animal food. Not only is there every advantage on all sides to be supplied with animal food from the constantly increasing products of agricultural districts adjacent to the city, but in twenty hours ride by railway we reach the great pastoral region of our country, where, in a few years, cattle and sheep will swarm over the wild prairies in infinite numbers, where they are kept in reserve to supply the markets of the constantly increasing people. Already the domestic animals—quadrupeds—are more numerous in civilized life than were the wild quadrupeds among the

aboriginal savages of this country. In the year 1870, taken together, horses, asses and mules, oxen, sheep and swine amounted to 85,703,913 millions, or more than twice the human population of the Union.

The census returns show the number to be as follows:

Horses.....	7,145,370
Mules and Asses.....	1,125,415
Milch Cows.....	8,935,332
Working Oxen.....	1,319,271
Other Cattle.....	13,566,005
Sheep.....	23,477,951
Swine.....	25,134,569
Total.....	85,703,913

Considering the great pastoral region of our country which will, before many years, be brought into use, the increase of quadrupeds will, no doubt, be greater than that of man; at least, for the next fifty years, the increase on the pastoral region will exercise a valuable influence in aiding to establish good and sufficient markets in the large cities of the Valley States, thus concentrating and strengthening the power of the interior people, who will find ample food at all times. And, in every view of the subject of food, there seems to be no question as to the advantage St. Louis will possess for an abundance and for cheapness over the other three cities, holding, as she does, the nearest relation to the producer, and with better facilities for obtaining it.

Let us now pass from this general consideration of the supply of food to St. Louis, to one of a more local character.

Just across the Mississippi river, and stretching up and down its water line in front of St. Louis, lies the American Bottom, estimated to contain 400 square miles, or 256,000 acres. In fertility of soil and strength of productive energies, no equal area of land can be found, to surpass it in richness. A large portion of this tract has been cultivated for more than one hundred years, without any indications of a loss of fertility, or productive strength. This tract alone is sufficient to supply an abundance of vegetable food, of the best quality, to a population of more than 5,000,000. An advantage of this kind, so easy of access and so reliable to produce, must be regarded as one of incalculable value, to aid in building up and maintaining the food supplies of a great city.

Next to food, as a prime necessity, is clothing. The principal materials out of which to make clothing are wool, cotton, flax and hides. Each of these can be produced cheapest and best in and adjacent to the food-producing regions, or, at any rate, the wool and the leather. In fact, in the final advancement and multiplication of the human species upon the planet, for the want of room, cotton will have to be abandoned, and only those animals and vegetables cultivated, that can serve the double purpose of supplying food and clothing, and material for the mechanic arts. This will compel cattle and sheep, and wheat and corn, to be the principal food. The flesh of the sheep and the cow will supply food, and the hides, leather, and the wool, clothing. The grain of the corn and the wheat will also form food, while the stalk will enter into many uses in art. The hog will finally be compelled to give up the conflict of life; his mission will be fulfilled, and man will require a more refined food for his

more refined organization. Fish will not be in the way of man in his higher and more multitudinous walk upon the earth, and, consequently, will continue to supply a valuable portion of his food. Cotton will, ere long, be driven to an extreme southern coast, and, finally, gain a strong foothold in Central America and other more extreme southern countries, and, at last, yield to superior demands. But, to return: St. Louis, on account of the large area of rich, and, in most part, cheap lands, surrounding her in every direction, has equal, if not better advantages, for being supplied with ample materials for cheap and good clothing than any other city on the Continent; and, with superior advantages, as we shall show after awhile, for the manufacture of the materials into clothing, she will stand first in facilities to supply food and clothing to her ever-increasing people.

But more especially must we look to wool as the most valuable material out of which, the greater portion of the clothing worn by the American people, is to be made. And it is not only a gratifying, but great fact, to know that in less than three hundred miles distant from St. Louis, the finest wool in the world, has been raised, for more than twenty-five years. The late Mr. Mark Cochirell of Nashville, Tennessee, so celebrated, for his immense flock of fine sheep, had the honor of raising the finest wool known in the world. He took the first premium for fine wool at the World's Fair, at London in 1851. The following letter from his own pen, shows the superiority of his wool, when compared with the reputable sheep of other and older lands.

WOOL AND WOOL-GROWING.

Nashville, Tennessee, October 21st, 1850.

Sir:—Your favor was duly received, and I cheerfully made a communication for your Annual Report, on the subject of wool-culture and sheep husbandry in the low latitudes of the United States. Observation and many years' experience have brought me to different conclusions from all others who have written on this subject, upon the effects and influence of warm climates on wool-growing, and especially upon the finest Saxony wools.

In a letter addressed to the Commissioner of the Patent Office, and published in the Report for 1848, page 627, I expressed the opinion "that the United States are a better wool-growing country than any portion of Europe; that the *low latitudes* have an advantage over the high, and will produce finer wool; and also, that as fine wool is now grown in the United States as can be found in the world."

I stated further that I had studied this subject with diligence and devotion for 35 years, and thought I had come to correct conclusions; but the Commissioner, Hon. E. Burke, decided that I "was wrong, and most decidedly mistaken in the whole matter," and that Mr. Fleischman's views, who had said that we must go to Germany for sheep, if we hoped to succeed, were no doubt correct. Still confident that my long study and experience had not misled me, when the Commissioner published his Report and remarks, I addressed him a letter, which may be found in the "Plough, Loom, and Anvil," page 366, December No., 1849, offering to exhibit selections from my own flock, in latitude 36deg., against any sheep which could be found in all Silesia, or any high latitude in Europe, and especially above 50deg., north latitude. This offer has not been accepted, and I have no fears of the result, if it ever should be.

It is gratifying now to refer to the impartial evidence of science in favor of the positions then taken. I was certain the facts existed, but I did not know that the researches and inventions of our countryman, P. A. Browne, Esq., of Pennsylvania, would so soon present the testimony in so satisfactory and tangible shape. Mr. Browne practised law for more than 30 years in the city of

Philadelphia; retired from practice, he has devoted years to the study of hair and wool, aided by the lights of others and his own inventions. I consider his examinations, therefore, entitled to full faith and credit.

From two letters addressed to the Hon. R. R. Reed, of Pennsylvania, and myself, published in the May No. of the "Plough, Loom and Anvil," 1850, I beg leave to make a few extracts, which show important results to the United States, because it places her at the head of the list of all countries for fine wools.

Mr. Browne examined 65 samples, or collections of samples, from all parts of the world, and especially the 18 samples brought over by Mr. Fleischman, from the most renowned flocks of Europe, and distributed, through your office, to the several States, as the standards of excellence, and worthy of imitation.

The quality is expressed by the number of fibres which will cover an inch; or, the diameter of one fibre is that fraction of an inch. The low figures indicate the coarser wools, and the high figures the finer.

	To an inch.
No. 4. Common American wool.....	500
" " The wool of Leicester (England).....	500
" " The Irish long wool.....	560
" 17. Wool of Odessa.....	750
" 31. Three-quarter American Saxony.....	1041
" 32. Wool from the herd of Dambran, improved by buck from Prince Lichnowsky, by C. L. Fleischman.....	1093
" 34. Lamb from the Duke of Leitcheman, in the possession of Hon. R. R. Reed, Pennsylvania.....	1093
" 37. Wool from buck "Napoleon," valued at \$1500, owned by M. Heller of Chrezelitz, whose flock is considered the only rival to that of Prince Lichnowsky, collected by Mr. Fleischman.....	1200
" 38. Wool from a buck of the herd of Reti, from Hungary, by Mr. Fleischman.....	1200
" 39. Ewe of Prince Lichnowsky, Kuchelna.....	1250
" 40. Buck of Roggon, in Mecklenburg, collected by Mr. Fleischman.....	1250
" 42. Ewe from the Duke of Leitcheman, dam of the ram of Hon. R. R. Reed.....	1250
" 45. Another ewe of Prince Lichnowsky, by Mr. Fleischman.....	1532
" 46. Buck, near Moscow, Russia, by same.....	1572
" 47. Buck of Prince Esterhazy, by same.....	1572
" 50. Ewe of the herd of Guettisandorf, celebrated for its thorough blood, by same..	1580
" 51. Buck of the herd of the Viceroy of Hungary.....	1600
" 54. Buck of Gross Herlitz, Silesia.....	1875
" 61. Specimen from a wool-merchant, Dresden.....	2186
" 57. Ewe of Colonel Randall, New York.....	1875
" " Specimens from 5 ewes and 5 bucks of Mr. S. Patterson, Pennsylvania.....	2186
" " Specimen of Colonel Lee's flock, Pennsylvania.....	1875
" " Flock of Mr. Robert Allen, Virginia.....	1875
" 65. Five specimens from the flock of Mr. Mark R. Cockrill, Tennessee, as follows:—	
" 1.	1572
" 2.	1875
" 3. This is a beautiful even wool.....	1875
" 4. This is a clean even wool of the extreme fineness of.....	2186
" 5. Not uniform.....	2186
" 5. Some strands in this specimen.....	2500

The above is the evidence of scientific instruments in the hands of a gentleman devoted to the investigation of this subject, and fully sustains my position, that the United States are growing as fine wool as Saxony, Silesia, or any other part of the world.

Mr. Fleischman recommended, in his report, that wool-growers should go to Chrezelitz and give Mr. Heller \$1500 for such bucks as "Napoleon," for the purpose of improving the *quality* of our wool. Compare the sample from Napoleon with the samples in Mr. Brown's cabinet, from New York, Pennsylvania, Virginia and Tennessee:

United States samples.....	1875, 2186 and 2500
Napoleon—rival flock to Prince Lichnowsky.....	1200

Was I mistaken, then, when I said that as fine bucks could be purchased in the United States

for \$50, as those in Germany which are valued and sold at \$1500? What improvement in *quality* of wool would such a buck as Napoleon be to the flocks of New York, Pennsylvania, Virginia and Tennessee, which grow the samples in the above collection, running from 1500 to 2500, whilst he wears a coat, grown in the snows of Northern Europe, of only 1200 to the inch?

The sample from the flock of Prince Esterhazy, of Hungary, is 1572. This Hungarian prince, it is said, owns a flock of 3,000,000 sheep, and 4,480,000 acres of land. We have a right to suppose that he has done every thing that wealth and leisure could accomplish in *that latitude*, to improve his flock. Yet, would a buck with a fleece of 1572 be an improvement upon our ewes in the low latitudes of 36deg., which bear now the "beautiful even fleece of 2186?" The same remarks apply with equal force to the flock of Prince Liehnowsky, of Kuchelna, whose samples are 1250 and 1562.

I cannot omit a notice of a remark of Mr. Fleischman, at page 306. He says: "It has been found that the highly improved sheep do not last well in America, and that the wool grown in America by the German sheep does not at all compare with that grown in Germany."

I can excuse Mr. Fleischman's partiality for his "fatherland," but I should do injustice to our own country not to challenge a test of such statements. I hold directly the reverse of both these propositions, and, on the subject of wool, refer to the testimony of Mr. Browne, who deserves from our wool-growers a service of plate and a suit of clothes from the "beautiful fleece of 2186," for his investigations in this important product.

There is a traditional belief entertained by the greater portion of the world, that sheep by nature belongs to a *cold country*; and that when they are removed from a cold to a warm climate, the wool will grow coarser. My observations and reflections on this point have convinced me that, when the latitude is not below 30deg N., the reverse of this tradition is true. I believe that the improved Saxony sheep, brought from the snows of Russia to Texas, in the United States, will produce a finer, evenner and fuller fleece than while in Russia. I think the evidence is pretty conclusive that the Merino sheep are natives of the orange groves, and are fitted by nature for the warm climates generally. Climate is a law of nature, and her laws are in harmony. The animal fitted for warm climates are most healthful and vigorous under the action and influence of these laws. The elephant, lion, and camel are organized to bear with healthful influences the long-continued heat of Africa, and the white bear grows fat on the ice of the Arctic seas. I can with confidence say to all husbandmen in the cotton districts of the United States, that, for growing fine wool, they have nothing to fear from climate.

I consider Texas an admirable location for wool-growing, as there is a scarcity of timber, and it is not so well adapted to other agricultural pursuits. The prairies are productive of grass without the labor of man. The winters are mild, open and warm, furnishing green food, with a regularly growing fleece throughout the year. Population sparse, and lands cheap, requiring but a small capital to engage profitably in the business. Our population is rapidly increasing, and must continue to do so; and last year we imported nearly 20,000,000 pounds of raw wool, besides the woolen goods which we annually take from foreign countries. These are strong facts in favor of a continued demand for wool.

Though cotton, the happy gift of heaven to that class of men blessed with the fewest comforts of life, is steadily in competition with all other materials for coarse goods, yet there are appropriate uses for wool which nothing else can supply. The cotton district, embracing 10 States, and about 500,000 square miles, presents a wide field for the growth of wool. The resources of the South are but partially developed, and I am happy to see Southern opinion awakening on this subject. The spindles and looms are coming to the cotton fields, and when they are up, the cotton crop alone will yield \$150,000,000 per annum. The wool crop, at 20 sheep to the square mile, will yield 30,000,000 pounds, besides rice and sugar. We have spread over our cotton territory, and the great enterprise of opening new cotton States is nearly closed. We have about \$750,000,000 invested in the growth of cotton, an enterprise of comparatively but a few years, and the addition now of the spindles and looms in the cotton fields will double the product of this great growing capital, and insure consumption by furnishing coarse goods for the laborers of all the world, at cheaper rates than they ever have been or ever can be furnished elsewhere.

The cotton district of the United States is to become, in a few years, the dispenser of a great public charity, by furnishing the laborers of many portions of the world with the cheapest clothing made in Europe or America. The wool crop may be grown in the cotton district, without diminishing the latter, and thus add to the resources of the South. All the cotton region is adapted to wool and sheep.

In my estimation, the South is not dependent and not weak; but rich in natural advantages, and now ready to say she will turn to account the gifts of nature, and show the strength of her position. No power at home or abroad has any just right to interfere with our domestic relations, and thereby disturb our quiet, and arrest the full development of our resources.

I have said that the low latitudes of the United States will grow the finest Saxony wool, finer than Silesia, the boasted province of Europe. I am also satisfied that the intellect of the Caucasian race, under the genial influences of our southern sun, and the effects of our domestic relations, is more rapid, more polished, and more brilliant than it is in the higher latitudes of our own country. Mind is power; and the South may add this to its other natural advantages; and these powers, when developed and understood, and associated in harmony, point to a prosperous destiny.

I am, very respectfully, yours,

MARK R. COCKRILL.

HON. THOMAS EWBANK,
Commissioner of Patents.

This fact is one of great value to the people of the Mississippi, and especially to St. Louis, she being situated in the center of a vast and superior sheep growing region.

Next to food and clothing as a prime necessity, for civilized men, is shelter; comfortable and commodious houses in which to live. Without these there can be no advancement made in society and civilization, as seen contrasting the condition of the ancient Greeks and Britons, with that of the civilized people of to-day.

The materials, out of which most of the houses are made, in America, are brick, stone and wood. In the cities, brick and stone are the principal materials used. Farmers use brick and wood. All these materials are to be found, in inexhaustible quantities, in every possible direction, from St. Louis, for more than three hundred miles distant. It is true Chicago possesses an advantage over St. Louis, for an abundant supply of cheap pine lumber. But when we consider that the best materials, out of which to make good houses, are stone and brick, and that all the better class and more substantial buildings, in the great cities, are made of these materials, and that no city on the continent is so well favored with them, as St. Louis, then the mere question of pine lumber, or at any rate of the slight difference in price, affords no advantage for building material, to Chicago, over St. Louis. Even the new and best buildings of Chicago are made of stone and brick, brought from distant places; while St. Louis stands on an immense foundation of good limestone, from which thousands of perch are quarried annually, and worked into first-class buildings. Besides, within fifty and one hundred miles from the city, in the south-eastern part of the State, are inexhaustible beds, of choice qualities, of as fine building stone as the continent affords:—such as the red and white granite; choice marbles of various colors, besides a great variety of other valuable qualities of soft and hard stones. Also extensive forests of the most valuable timbers, suited for the mechanic arts and for building material, are to be found in the

south-eastern portion of the State, one and two hundred miles from St. Louis. Brick, first-class quality, are made in various parts of the city, and supply the demand for building purposes. Nor can any of these supplies be exhausted for ages to come. Stone and wood are found in abundance in all parts of the Valley States, wherewith to supply the farmer with cheap building materials.

Thus, we have seen that the three essential requisites, food, clothing and shelter, necessary to man's wants and the purposes of civilization, can be supplied in abundance and cheapness to St. Louis, with greater advantages than to any other city belonging to the Valley States; and these must render her the greatest market and the best depot for such materials that the continent affords.

Passing, then, from these essential requisites, let us take up another line of discussion, that bears more directly upon the future development of American commerce and American civilization. I refer to the productive power of the continent, which is the basis of our physical and material life. In what does the productive power of the continent consist? I answer it consists in the rich soils suited to agricultural purposes, the coal-fields, the mineral deposits, the valuable forests, the water-powers, the domestic navigation, with all o'erspread with a temperate and healthful climate.

These comprise the productive powers of the continent, and these are the materials and elements that form the bases and support of mighty cities and empires. And with us of the Mississippi Valley they are more abundant than on any other portion of the globe, and unless disturbed, by some unforeseen calamity, of unparalleled character, this people will bring them all into requisition until they have builded mightier, than any people of ancient or modern times. No land is so great in its productive powers, and no people possess as great possibilities. Still the whole is not known. Although the largest coal and iron deposits of the continent are already known, the geology of the entire extent of our domain is so imperfectly known that there still remain undisturbed in many of the Territories, and even in some of the States, valuable deposits of these two substances, which, ere long, will be unearthed and made subservient to the wants of our people.

But let us tell of what we know. Beginning with the soils of the country, it is well understood, by those acquainted with its surface, that the largest and richest body of soil, best suited for corn, wheat, oats, rye, and hay-growing, is spread over the Valley States. In fact, no country in the world has so large an area of rich land as belongs to the States of the Mississippi Valley. In capacity for producing the various products in the department of agriculture, it has already been referred to in the discussion of the subject of food, and will require no further consideration.

Next to the corn-fields above come the coal-fields below, and the iron deposits. These are the material upon which modern and more advanced civilization is founded, more than upon any other substances the arts have brought into use. Says Prof. Taylor:

"The two important mineral substances, coal and iron, have, when made available, afforded a permanent basis of commercial and manufacturing pros-

perity. Looking at the position of some of the great depositories of coal and iron, one perceives that upon them the most flourishing population is concentrated—the most powerful and magnificent nations of the earth are established. If these two apparently coarse and unattractive substances have not directly caused that high eminence to which some of these countries have attained, they at least have had a large share in contributing to it.”

M. Aug. Vischers also says, that “coal is now the indispensable aliment of industry; it is a primary material, engendering force, giving a power superior to that which natural agents, such as water, air, &c., procure. It is to industry what oxygen is to the lungs, water to the plants, nourishment to the animal. It is to coal we owe steam and gas.”

Whoever will look into the development of commerce and civilization, during the greater part of this century, will find that coal and iron have given them their cast and development in Europe and America. Nor have either of these attained their highest use. On examination, we find that St. Louis is far better supplied than Chicago, Cincinnati, or New Orleans, with coal and iron; in fact, she stands in a central position to the greatest coal-fields known on the globe. Surrounded on the one side by the inexhaustible coal-beds of Illinois, and on the other by the larger ones of Missouri, Iowa, and Kansas, who can doubt her advantages in the use of the most important substance for the next two thousand years? On the one side we have Illinois, with her 30,000 square miles of coal, which is estimated by Prof. Rodgers to amount to 1,227,500,000,000 tons, which is much greater than the deposits in Pennsylvania—they amounting, according to the same authority, to 316,400,000,000 tons. On the other side, we have Missouri, with more than 26,887 square miles, amounting to more than 130,000,000,000 tons. Iowa has her 24,000 square miles of coal; Kansas, 12,000 square miles; Arkansas, 12,000 square miles; and the Indian Territory, 10,000 square miles. Nearly all the other States are likewise bountifully supplied, but these figures are sufficient to show the position of St. Louis to the greatest coal deposits in the world. We can only approximate to the value of these resources by contrast. It is the available use of these two substances that has made England—a little island of the sea, not so great as the State of Iowa—the great heart of the world's civilization and commerce. She, with her 144,000,000,000 tons, or 12,000 square miles, of coal, with its greater development and use, reckons her wealth, in substantial value, at \$100,000,000,000; while our nation, with our 3,740,000,000,000 tons, or 500,000 square miles, of less developed and not so well used coal, and more than twenty-five times as large, are only reckoned to be worth \$25,245,400,000, with an annual increase of \$921,700,000. It is true, our nation is only in its infancy; but these facts and the contrast teach us how mighty we can be, if we do but use these apparently coarse and unattractive substances, coal and iron, as the best wisdom and skill will enable. We possess thirty-four times the quantity of coal and iron possessed by England, and perhaps double as much as that possessed by all other portions of the earth besides. These resources are available located; they are in proximity to the widest plains and the richest soils known to man. They are developed by ocean-like lakes or magnificent rivers,

and are or will be, traversed by railroads from ocean to ocean. Their value is incalculable, their extent boundless, and their richness unequalled. They are mines of wealth, more valuable than gold, and sufficiently distributed over this great valley to supply well-regulated labor to 400,000,000 producers and consumers. Adjacent to our coal-fields are our mountains of iron of a superior quality, and of quantity inexhaustible. Thus is St. Louis favored with coal and iron in such endless supplies as to always render them as cheap as the American market can afford.

The rich deposits of precious metals which belong to the great mountain system of our continent, being on the west side of the valley, have already, and will necessarily yet more, contribute to building up the interior of the country than either coast region; and though this interest never can be so valuable as that of coal and iron, it is of immense value and important in its bearing upon the subject under discussion. Already the account has been made large, as the following table shows, but not the half has been taken from those rich and extended mines:

Table showing the Growth of Coinage of the United States from 1793 to 1867.

YEARS.	GOLD.	SILVER.	COPPER.	TOTAL.
1793 to 1800, 8 years.....	\$1,014,290 00	\$1,440,454 75	\$79,390 82	\$2,534,135 57
1801 to 1810, 10 ".....	3,250,742 50	3,569,165 25	151,246 39	6,911,154 14
1811 to 1820, 10 ".....	3,168,510 00	5,970,810 95	191,158 57	9,328,479 52
1821 to 1830, 10 ".....	1,903,092 50	16,781,046 95	151,412 20	18,835,551 65
1831 to 1840, 10 ".....	18,791,862 00	27,190,779 00	342,322 21	46,333,963 21
1841 to 1850, 10 ".....	89,543,328 00	22,226,755 00	381,670 83	112,050,753 83
1851 to 1860, 9½ ".....	470,833,180 98	48,087,763 13	1,246,612 53	520,175,556 64
1861 to 1867, 7 ".....	296,967,464 63	12,638,732 11	4,869,350 00	314,475,546 74
Total, 74 years.....	\$885,375,470 61	\$137,914,587 14	\$7,415,163 55	\$1,030,705,141 30

Valuable forests of the best timbers used in mechanical industry are to be found in the southeastern part of the State, and will, in due time, furnish material for agricultural implements, furniture, and the various uses to which timber is applied. Water powers, not surpassed in any part of New England, are to be found in many parts of the southern half of the State, and which, when properly improved, will contribute largely to the commercial interests of St. Louis.

Not only is St. Louis, situated central to the productive powers of the Mississippi Valley, and in such a manner as to command them to her markets, with greater facilities and advantages, than any other city on the continent, but she is also centrally situated in this great system of domestic navigation, and cannot fail to be, in all the future, the most important city and depot identified with its interests. In the nature of river navigation, a smaller class of boats is required for the upper waters than those which can be most economically used in deeper streams, and hence arises a necessity for transfer, at some point, from up-river boats to those of greater tonnage; and at that point of transfer, business must arise sufficient of itself to sustain a considerable city. The fact that St. Louis is this natural point of transfer between the upper waters of the

Mississippi, Missouri, and Illinois, and the great channel thence to the Gulf, is not to be overlooked in estimating its natural advantages. To the domestic navigation we add the railway system of the Valley States, which will, in a few years more, comprise more than 100,000 miles; and, by reference to the map illustrating this new inland agency for the easy exchange of products and people, we behold at a glance a most wonderful system traversing all parts of these States. In the rapid construction of these lines of communication, St. Louis is fast becoming the greatest railway center on the Continent, as well as in the world, and, with her advantages for domestic navigation, she is soon to be provided with the best commercial facilities of any city on the globe; and to her 20,000 miles of river navigation will be added, in less than fifteen years, a continental system of railway communication; and with all these constantly bearing an ever-increasing commerce to her markets, who cannot foresee her destiny among the cities of the world? These thousands of mile of railway can be built the cheapest of any extended system in the world, as they are unobstructed by mountain ranges; they will also be the straightest, shortest, and best routes from point to point, for the same reason. Granting that she will become the center of the greatest railway communication and of river navigation in the country, we must take into the account the question of freights, as an item of interest which will bear directly upon the subject of the growth of all American cities. Cheap freights will have a direct and important bearing upon the matter of distributing food and raiment to the people of the Valley States, and also of giving to their products the advantages of the best market. To settle this question in favor of St. Louis, involves but two points necessary to be considered: the first, the universal competition constantly existing between the various rival railroads of the Valley States, which will, of necessity, make the freights to St. Louis as cheap as to any other city; the second point is, that St. Louis stands in the midst of the greatest producing and consuming region of the country, and in this she cannot fail to have the advantage over any rival city that may aspire for empire in the republic or the world. Situated, then, as she is, in the very heart of the productive power of the country, and destined, at a very early date, to be connected by railway and by water, in the most advantageous way, with every city and harbor upon our seacoast, and with every inland city and productive region where industry and wealth can find opportunity, we are led to consider her future as a commercial and manufacturing city, and her advantages to become a distributing point for the future millions of the industrious and intelligent of our race who are yet to inhabit this Continent, under one flag and one language.

POPULATION.

Having considered the material resources of the great valley, and the relation they bear to St. Louis, let us now consider the question of population—its westward movement and its future growth upon the continent.

The subject of the growth and distribution of the population of a country is one of the most important and interesting subjects which is brought into the

discussions of statistical science. It not only involves a consideration of the old facts of ethnological science, but the new facts, which the influence of isothermal lines, or lines of equal temperature, demonstrate, to exert in governing and directing mankind on the continents.

With us, in America, with our extended domain, varied climate and favorable topography, the subject will ever be a source of fruitful investigation. Heretofore the movement of population in North America has been from east to west, in conformity to the general law of human migration. There is still another movement to which people conform as they grow populous. It is at right angles—north and south from the axis, or line of equal temperature, of the zodiac of empire. Having reached the Pacific coast and completed the circuit of the globe, our people will henceforth be governed more by the second movement than by the first. They will struggle to condense and fortify the center, in obedience to the active and passive principles of supply and demand, as they constantly yield to this second movement, north and south, to exchange their products between zones. The first movement of man on the earth is the movement of population, from the east to the west. It is the movement of exploration, conquest and dominion. Under the influence of this movement, man bridges the rivers scales the mountains, and disputes with the red man and the buffalo the empire over nature.

The movement north and south at right angle to the axis of the zodiac of empire is the movement that produces power, civilization, wealth and refinement. Up to the year 1840, of our country's history, the progress whereby twenty-six States and four territories were established and peopled, a solid strip of twenty-five miles in depth, and reaching from Canada to the gulf of Mexico, was added annually along the frontier of the Union. Since 1840 the center of population has moved westward in the following order as indicated by the figures below.

Year.	Lat.	Long.	APPROXIMATE DESCRIPTION.
1840	39 deg. 02 m.	80 deg. 18 m.	22 miles south of Clarksburg, W. Va.
1850	38 " 59 "	81 " 90 "	25 miles S. E. of Parkersburg, W. Va.
1860	39 " 03 "	82 " 50 "	20 miles south of Chillicothe, Ohio.
1870	39 " 15 "	83 " 39 "	5 miles west of Hillsboro, Ohio, or 48 miles east by north of Cincinnati.

The above calculation is from those of Prof. Hilgard of the Coast Survey Department, and we accept as correct. It shows that the center of population moved westward at the rate of fifty-five, eighty-two and forty-six miles, respectively, during the three past decades. At this rate of advancement, Prof. Hilgard assumes that in the year 2000, the center of population in its westward movement "will still be lingering in Illinois." This might possibly be true if there was no Pacific Ocean, and a continent existed instead, with favorable advantages for human abode and the growth of civilization. This not being the case, the professor's assumption cannot be supported by any existing or inferential evidence.

To assume his statement to be correct, we must assume that the pioneer army of the American people will move on, west of San Francisco, in regular

order, as heretofore, until the year 2000; thus enabling the center of population, in the mean time, to follow on with slow—paced march. *This* being utterly out of the question, we can assure Prof. Hilgard, that the center of population, on this continent, in its western movement, will reach the Mississippi river much sooner than the time he has fixed for it; yes, in less than half the time. But we must not lose sight of the fact, while considering this subject that the center of population movement will be arrested somewhere westward,—that it will make a lodgment somewhere in the grand valley of the Mississippi. It must do so. And it is safe to assume, that the center of population will never go west of the Mississippi river; at any rate, in no event, will it pass beyond the State of Missouri. In evidence of this we have only to look at a map of our country to ascertain where the dense population will grow up on our soil. Whoever examines the map, must conclude that the most populous part of North America, will be that portion that lies between the Ohio and Mississippi rivers, including the states of Ohio, Indiana, Illinois, Michigan and Wisconsin. It is reasonable to assume from the character of their resources, that those states, in time will contain about one-eighth of the population of the entire country. Missouri can and will sustain a greater number of human beings than either one of those states, but the adjacent states west of the Mississippi river, will not attain near so dense a population. The pastoral and mountainous regions of our domain, will never support a very dense population, and when we consider that the more important productive energies of the country, are along and adjacent to our internal river system, we must conclude that there is the place for the center of human power on the continent, and that it can never be removed from those resources and advantages, so favorable to man's uses and interests; not only so but even now the growth of population is more rapid in those states of the west where the natural resources are the greatest, as the following tables will show:

TABLES.

Showing an Analysis of the Population of the United States, according to the following Geographical Classification of the States and Territories.

NORTH ATLANTIC STATES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
Maine.....	298,269	399,455	501,793	583,169	628,279	626,915
New Hampshire.....	244,022	269,328	284,574	317,976	326,073	318,300
Vermont.....	235,749	280,652	291,848	314,120	315,098	330,551
Massachusetts.....	523,159	610,498	737,699	994,514	1,231,066	1,457,851
Rhode Island.....	83,015	97,199	108,830	147,545	174,620	217,353
Connecticut.....	275,102	297,675	309,978	370,792	460,147	537,454
	1,659,316	1,954,717	2,234,722	2,728,116	3,135,253	3,487,924

Per cent. of increase for each decade: 1820-30, 14.80; 1830-40, 14.32; 1840-50, 22.08; 1850-60, 14.96; 1860-70, 11.66.

CENTRAL ATLANTIC STATES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
New York.....	1,372,111	1,918,608	2,428,921	3,097,394	3,880,735	4,382,757
New Jersey.....	277,426	320,823	373,306	489,555	672,035	906,066
Pennsylvania.....	1,049,507	1,348,233	1,724,013	2,311,783	2,906,915	3,521,791
Delaware.....	72,749	76,748	75,085	91,532	112,216	125,015
Maryland.....	407,350	447,040	470,019	583,834	687,019	780,894
District Columbia.....	33,039	39,831	43,712	1,421,661	1,596,318	1,667,177
Virginia & W. Virginia.....	1,005,129	1,211,405	1,239,797	51,687	75,088	131,700
	4,217,311	5,362,691	6,357,873	8,046,649	9,932,568	11,515,430

Per cent. of increase for such decade: 1820-30, 27.13; 1830-40, 18.67; 1840-50, 26.56; 1850-60, 23.42; 1860-70, 15.94.

SOUTH ATLANTIC STATES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
North Carolina.....	638,829	737,987	753,419	869,039	992,622	1,071,696
South Carolina.....	592,741	581,185	594,398	668,507	703,708	705,606
Georgia.....	340,983	516,823	691,392	906,185	1,057,283	1,184,100
Florida.....	.....	34,730	54,477	87,415	140,424	187,748
	1,482,552	1,870,725	2,093,686	2,531,176	2,894,040	3,148,824

Per cent. of increase for each decade: 1820-30, 26.18; 1830-40, 11.92; 1840-50, 20.90; 1850-60, 18.21; 1860-70, 8.80.

	1820.	1830.	1840.	1850.	1860.	1870.
Totals.....	7,359,180	9,188,133	10,686,281	13,305,941	15,961,891	18,152,180

Total per cent. of increase for each decade: 1820-30, 24.85; 1830-40, 16.30; 1840-50, 24.51; 1850-60, 20.00; 1860-70, 13.32.

Tables showing an Analysis of the Population of the United States—Continued.

LOCATION OF POPULATION.

Year.	Whole Population.	Population of Atlantic Slope.	Per cent. of whole.	Population of Miss. Valley and Pacific States.	Per cent. of whole.	Population of Up. Mississippi Valley States.	Per cent. of whole.
1820	9,639,190	7,359,180	76.66%	2,249,418	23.33%	1,860,107	19.30
1830	12,866,020	9,188,133	71.16%	3,712,457	28.83%	3,010,736	23.70
1840	17,069,453	10,686,281	62.50	6,392,684	37.50	5,058,154	29.62%
1850	23,191,876	13,305,941	57.12%	9,937,622	42.87%	7,598,614	32.75
1860	31,443,321	15,961,891	50.50	15,595,430	49.50	11,792,814	37.50
1870	38,549,987	18,152,824	47.10	20,397,807	52.90	16,028,231	41.60

PROBABLE FUTURE POPULATION OF THE UNITED STATES.

Year.	Whole Population.	Population of Atlantic Slope.	Per cent. of whole.	Population of Miss. Valley and Pacific Slope.	Per cent. of whole.	Population of Up. Mississippi Valley States.	Per cent. of whole.
1880	50,885,983	20,990,470	41.25	29,895,513	58.75	23,407,552	46
1890	67,169,497	23,602,248	35.25	43,567,249	64.75	33,920,596	50.50
1900	88,663,736	26,044,873	29.37%	62,618,863	70.62%	48,765,055	55
1910	107,036,130	28,153,490	23.50	81,153,490	76.50	63,579,461	59.40

Of this entire population there is not an average of fourteen to the square mile of our vast domain, exclusive of Alaska.

Tables showing an Analysis of the Population of the United States--Continued.

MISSISSIPPI VALLEY STATES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
Ohio.....	581,295	937,903	1,519,467	1,980,329	2,339,511	2,665,151
Michigan.....	8,765	31,693	212,267	397,654	749,113	1,184,059
Kentucky.....	564,135	687,917	779,828	982,465	1,155,684	1,321,011
Indiana.....	147,178	343,031	685,866	988,416	1,350,428	1,680,637
Illinois.....	55,161	157,445	476,183	851,470	1,711,951	2,539,891
Iowa.....	.....	.....	43,112	192,214	674,913	1,191,792
Wisconsin.....	.....	.....	30,945	305,301	775,881	1,054,670
Tennessee.....	422,761	681,904	829,210	1,002,717	1,109,801	1,258,520
Missouri.....	66,557	140,455	383,702	682,044	1,182,012	1,721,295
Arkansas.....	14,255	30,388	97,574	209,897	435,450	484,167
Minnesota.....	.....	.....	.....	6,077	172,023	459,706
Kansas.....	.....	.....	.....	.....	107,209	364,398
Nebraska.....	.....	.....	.....	.....	28,841	122,993
	1,860,107	3,010,736	5,058,154	7,598,614	11,792,841	16,028,291

Per cent. of increase for each decade: 1820-30, 61.86; 1830-40, 68.00; 1840-50, 50.20; 1850-60, 55.20; 1860-70, 37.61.

GULF STATES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
Alabama.....	127,901	209,527	590,756	771,623	964,201	996,992
Mississippi.....	75,448	136,621	375,651	606,526	791,306	827,822
Louisiana.....	152,923	215,739	324,411	517,762	708,002	726,915
Texas.....	.....	.....	.....	212,592	604,215	812,996
	356,272	661,887	1,290,818	2,108,503	3,067,725	3,364,825

Per cent. of increase for each decade: 1820-30, 85.63; 1830-40, 95.43; 1840-50, 63.35; 1850-60, 45.50; 1860-70, 9.68.

	1820.	1830.	1840.	1850.	1860.	1870.
Totals.....	2,249,418	3,712,457	6,392,684	9,937,622	15,595,430	20,397,807

Total per cent. of increase for each decade: 1820-30, 65.04; 1830-40, 72.19; 1840-50, 55.44; 1850-60, 56.93; 1860-70, 30.79.

PACIFIC STATES AND TERRITORIES.

STATES.	1820.	1830.	1840.	1850.	1860.	1870.
California.....	.....	.....	.....	292,597	379,994	560,247
Nevada.....	.....	.....	.....	.....	6,857	42,491
Oregon.....	.....	.....	.....	13,294	52,465	90,923
Territories.....	33,039	89,834	43,712	124,614	298,577	311,030
	33,039	89,834	43,712	230,505	734,893	1,004,691

Per cent. of increase for each decade: 1850-60, 218.82; 1860-70, 35.71.

The reader will readily perceive the destiny of our country, by an examination of the above figures. It will be seen that in 1820 the population of the Atlantic slope was 76⁶⁶/₁₀₀ per cent. of the whole, leaving 23³³/₁₀₀ to the Mississippi Valley. By the census returns of 1870, which comprise a growth of fifty years, the Atlantic slope has 47¹⁰/₁₀₀ per cent., and the Mississippi and the country west of it

52 $\frac{20}{100}$ per cent. of the whole population of the country. Assuming that the past furnishes a correct basis for estimating the future growth of our population, it will require but forty years more—or from 1820 to 1910—to almost precisely reverse the relative proportion of the whole population of the country, thus giving to the Valley States 76 $\frac{50}{100}$ per cent., and the Atlantic slope 23 $\frac{50}{100}$ per cent. of the whole population.

But let us pursue the inquiry a little further, and if possible ascertain what the future growth of our population is likely to be.

We have the same temperate climate, in the central and most fertile portion of the Mississippi Valley, as that of China; and with superior resources, it is not unreasonable to assume that a population as numerous as that of China can easily find subsistence in this valley. That great Empire proper has an area of 1,297,999 square miles; the Mississippi Valley has an area 2,455,000, which almost doubles the area of the Celestial Empire. The most populous portion of China has an average of 850 inhabitants to the square mile, and the entire population averages 268 to the square mile. An average of 268 to the square mile would give the Mississippi Valley a population of about 650,000,000. Dividing the whole country into five equal parts, and there will be found in the valley of the Mississippi three parts, and the two slopes will contain one part each. This will give to each slope about 220,000,000, and to the present area of the United States, exclusive of Alaska, about 1,190,000 inhabitants—almost equal to the entire population of the earth at the present time. But long before we shall reach this number, our Constitution will over-arch the entire continent, by which our numbers will be increased at least one-third more than our present area would contain. “We double our numbers once in every twenty-five years, and must continue to do so until the action in the prolific principle in man shall be checked by the same cause which checks it in every race of animals—the stint of food. This cannot happen with us until every acre of our generous soil shall be put into requisition”—until the product of more than 3,000,000,000 of acres shall be insufficient to fill the mouths which feed upon them. If we double our numbers every twenty-five years, we shall have a population in a century and a quarter of 1,248,000,000, or more than the present population of the globe. A century is but a point in the age of a nation. The life of an individual often spans it; and the child is now born that will see this nation with a population of more than 600,000,000. 400,000,000 will reside in the Great Valley, 70,000,000 on the Atlantic slope, and 130,000,000 on the high table lands of the West and the Pacific slope.

Then it must be evident that somewhere in this great valley, central to its 600,000,000 inhabitants, and central to the productive energies of the continent, must grow up the future great city of the world.

But let us then go a little deeper into the discussion. Having pointed out a condition of advantages which nature, by an inscrutable wisdom, has organized sufficiently strong to insure, under a well-directed civilization, the production on our Continent of the future great city of the world, it is a part of the argument to point out some of the essential incidental wants and conditions

which must control the use of products in civilized life, in order to make them subserve the highest use in supplying the wants of man.

The first essential want of any productive people are markets, whereat to dispose of their surplus products, mechanical or agricultural, at profitable prices. Markets are a want of population in all lands. Mr. Seaman says, in the first series of his valuable work on the progress of nations, that "population alone adds value to lands and property of every kind, and is, therefore, one of the principal sources and causes of wealth." And why is it so? Simply because population creates a market by causing a demand for property and products; by enhancing the price and exchangeable value, of the products of the toiler. Population thus creates markets and markets operate to enhance prices and to increase wealth, industry, and production. Markets are, therefore, among the principal causes and sources of value and of wealth, and stimulants of industry. The farmer, mechanic, miner, and manufacturer are all beneficial to each other, for the reason that each wants the products of every other in exchange for his own, and thus each creates a market for the products of all the others, and thereby enhances prices and stimulates their industry. Hence the advantage to the farmer of increasing mechanical, manufacturing, and mining industry, as far as practicable, in his own country, in order to create a market for his products and to encourage domestic commerce.

Agricultural products alone cannot furnish the materials of an active commerce, and two nations almost exclusively agricultural have seldom much intercourse with each other. Tyre, Carthage, and Athens, in ancient, and Venice, Florence, Genoa, and the Netherlands, in more modern times, were the greatest of commercial nations at their respective eras, as Great Britain is now, because they were also in advance of all other nations in the mechanic arts and manufactures, and their commerce was based on their mechanism and manufacturing industry, which furnished the principal subject-matter and materials for making exchanges and carrying on commerce with foreign nations. Then it is that the people of this great valley must look to the proper and highest use of the resources and materials which nature has so bountifully bestowed. Capital and skill must be made to supply the ever-increasing demand of this growing people, and thus it will become the mightiest in art, the most bountiful in the field, and the richest in commerce, "and in peace more puissant than army or navy, for the conquest of the world;" and, stimulated to loftier endeavors, each citizen, yielding to irresistible attraction, will seek a new life in the great national family.

But it is argued by some that a city cannot be successful in the pursuit of both commercial and manufacturing interests. This cannot be maintained as a correct position. There never has been any war between commerce and the mechanic arts. There can be none. They are the twin offspring of industry and intelligence, and alike dependent on each other for prosperity. The false conception of the relations they hold to each other, and the condition of prosperity they impose upon a city, come from a failure to perceive the true interests. The principles of economy regulate them both, and it is rarely that a city situated, as they are, on a harbor on the coast, or an available point on a

river, where commerce can find its easiest exchange, is equally advantageously situated with reference to the raw material necessary, to enter into the mechanic arts on such terms of competition, as to enable the producer to compete with rival products in the market of the country. It is because cities are so situated that a strict adherence to the rules of economy cannot admit of the union of commerce and mechanic arts in the same city, that some suppose that a commercial city cannot be made a manufacturing city, and that a manufacturing city cannot be made a commercial city.

The following remarks, from a writer in the *New York Times*, is a valuable item in our argument: "No one who desires to understand the whole subject of his country's future should fail to seek the metropolitan center of that country. The question which puzzles the people, and even the newspapers, of late, is this, 'Where is Paris, the London, or the Jerusalem, of the nation?' I know New York has yet the clearest title to that claim, but of late St. Louis has spoken much and often in her own behalf—with what truthfulness, I propose to examine. Chicago has been heard, Cincinnati puts in her voice, Philadelphia prides herself upon her strength and beauty, Boston calls herself the hub, and others put in their claims. Now, next to New York, I am disposed to regard the claim of St. Louis. Before slavery died, this claim was not worth much, but that dead weight is now removed. Standing here, then, in St. Louis an Eastern man, I cannot resist the impression that I am in the future commercial, if not political, metropolis of the land. A thousand voices conspire to enforce this impression upon the not very prophetic mind. I would make no invidious flings at the cheek of Chicago, the conceit of Boston, the cool silence of a New Yorker, as he points to a forest of masts and a million of people, the nonchalant airs of the City of Brotherly Love, and the peculiar habits of Cincinnati. Chicago has the railroads, she says. Granted. A metropolis of railroads, without a river deep, pure and broad enough to afford drink to her present population, suggests the idea that railroads cannot make a city. Fitchburg, in Massachusetts, has more railroads than any New England town. What does that bring her, save the name of being Fitchburg? Shipping alone, which you have in New York, cannot make a city. Philadelphia may keep on annexing every town in Pennsylvania, and Jersey, too, and that cannot make a metropolis. The pork trade flourishes in Cincinnati, but even so respectable a constituency as a gentlemanly porker, who loves luxury, lives on the fat of the land, and is otherwise excessively aristocratic, cannot make a metropolis. In fact, no great cosmopolitan center can be made out of one specialty. Manchester is greater than London in its specialty, but Manchester's specialty must always keep it constrained, and prevent its ever becoming a center. Cologne, with 'seventy-nine well-defined, distinct, and separate' perfumes, has made it the city of odors, but Cologne can never be a capital. Shoes make and kill Lynn at once. Lowell and Lawrence have reached their highest glory. Chicago is a depot for speculators in grain, and Cincinnati abounds in hogs, but this is the end of their glory. New York and St. Louis are alike in this: you will find every specialty in about equal proportion. St. Louis only needs one thing to make it to the West what New York is to

the East—railroads. She is not even an inland city. Light-draught sailing vessels can sail from St. Louis to London. All that she further needs is age. Up to 1866, capital was slow to venture and settle down in this city. Save a few thrifty Germans, the population of St. Louis was southern. This was her condition up to this time, so that she is, practically, a city of only ten years' growth."

There is another principle that enters into the account, which may be termed an involuntary or fortuitous cause—a kind of happening so! It is the highest form of incidental action in commerce. Often commerce, as if by the control of an unknown law, will change from one city to another, and impoverish the one and give vitality and strength to the other. These changes, at first thoughts, seem to be as inexplicable as the eddy movements of the water in the stream. They are changes that usually have their origin in the action of a single man in the timely use of money, sometimes by a distant cause, sometimes by legislation; but never does commerce forsake an available point for the development of mechanical industry. Looking at St. Louis, with her location for internal commerce and mechanical industry without a parallel on the earth, we can safely say that she is destined to unite in one great interest a system of commerce and manufacturing that will surpass in wealth and skill that of old England. It is true, her iron furnaces and glass factories will be built some distance outside of her corporate limits, but the wealth and the labor will be hers, and beneath her sway will be united side by side, in the most profitable relations and on the largest scale, the producer and consumer; and they, actuated by a universal amity, will seek the most liberal compensation, attain the highest skill, aspire to a better manhood, and learn to do good. The manufacturing of wood into its various uses will also form a very important part of the industry of this city, as will also the manufacturing of fabrics of various kinds. Thus, with a great system of manufacturing industry, compelling the coal, the iron, the wood and the sand to serve the purposes and wants of the commercial interests, as well as to enter into all channels through which capital flows and which industry serves, both wealth and population will be developed and concentrated in the highest degree. The time fixed for the future great city of the world to grow up, as the most consummate fruit of man's civilization, is within one hundred years from our date.

Let us look still deeper into this matter, and consider the new agencies and influences that tend in modern times with such irresistible force to concentrate mankind in the great interior cities of the Continents. The greatest of these agencies compels a more rapid development of the internal commerce of modern nations than in past times, and the consequent organization and concentration of human power in the interior cities.

There is not a living man whose experience, if he knows the facts written in the records of his own land, does not teach him of the continental growth and the consequent interior development of the country, in support of the argument under consideration. So great are the facts, that the constant development of the internal trade of our continent is rapidly reversing the proportion of our domestic to our foreign commerce, so as to soon show the latter to stand

in comparative value to the former, as the cipher to the unit; and that the immense growth of our domestic and internal commerce will guide and control our industry, and establish and organize human power and civilization in our own land in conformity to the most economic principles of production, supply and demand, there is no manner of doubt. This done, our foreign commerce will only be ancillary to the enjoyments of our people, and contribute to the development of cosmopolitan ideas among the world's inhabitants, more than to the creation of wealth among the nations.

It may be asked, to what cause must this change in the relative value of foreign and domestic commerce, and the influence of each upon civilized man, be referred? The answer is, that steam is the cause; It is the most wonderful artificial agency to advance public and private wants that man has yet made subservient to his will. It almost serves his entire mechanical wants.

We, then, again repeat, that it is this agency that is rapidly transforming the ancient order of the world's industry and commerce to a new application and a new power; and will compel the cities of the interior, in the future, to outgrow in all time the coast cities. It is this agency, more than all other mechanical agencies, that has lifted mankind from the vassal empires of Cyrus, the Cæsars, and Charlemagne, to the great empires of our own time. It is this agency that will forever develop domestic commerce to a vastly greater value than that of foreign commerce, and, consequently, is the most powerful agent to produce the great city of the future that the genius of man has made subservient to his wants.

But let us not be understood as desirous of undervaluing foreign trade. We hope and believe that its greatest blessings and triumphs are yet to come. Many of the articles which it brings to us add much to our substantial comfort, such as woolen and cotton goods, sugar and molasses; and others, such as iron and steel, with most of their manufactures, give much aid to our advancing arts. But if these articles were the products of domestic industry—if they were produced in the factories of Lowell and Dayton, on the plantations of Louisiana and in the furnaces, forges, and workshops of Pennsylvania and Missouri—why would not the dealing in them have the same tendency to enrich as now that they are brought from distant countries?

A disposition to attribute the rapid increase of wealth in commercial nations mainly to foreign commerce, is not peculiar to our nation or our time; for we find it combated as a popular error by distinguished writers on political economy. Mr. Hume, in his essay on commerce, maintains that the only way in which foreign commerce tends to enrich a country is by its presenting tempting articles of luxury, and thereby stimulating the industry of those in whom a desire to purchase is thus excited—the augmented industry of the nation being the only gain.

Dr. Chalmers says: "Foreign trade is not the creator of any economic interest; it is but the officiating minister of our enjoyments. Should we consent to forego those enjoyments, then, at the bidding of our will, the whole strength at present embarked in the service of procuring them would be transferred to other services—to the extension of home trade; to the enlargement of our na-

tional establishments; to the service of defense, or conquest, or scientific research, or Christian philanthropy." Speaking of the foolish purpose in Bonaparte to cripple Britain by destroying her foreign trade, and its utter failure, he says: "The truth is, that the extinction of foreign trade in one quarter was almost immediately followed up either by the extension of it in another quarter, or by the extension of the home trade. Even had every outlet abroad been obstructed, then, instead of a transference from one foreign market to another, there would just be a universal reflux towards a home market that would be extended in precise proportion with every successive abridgment which took place in our external commerce." If these principles are true—and we believe they are in accordance with those of every eminent writer on political economy, and if they are important in their application to the British isles—small in territory, with extensive districts of barren land, surrounded by navigable waters, rich in good harbors, and presenting numerous natural obstacles to constructions for the promotion of internal commerce; and, moreover, placed at the door of the richest nations of the world—with how much greater force do they apply to our country, having a territory twenty times as large, unrivaled natural means of inter-communication, with few obstacles to their indefinite multiplication by the hand of man; a fertility of soil not equaled by the whole world; growing within its boundaries nearly all the productions of all the climes of the earth, and situated 3,000 miles from her nearest commercial neighbor.

Will it be said that, admitting the chief agency in building up great cities to belong to internal industry and trade, it remains to be proved that New York and the other great Atlantic cities will feel less of the beneficial effects of this agency than St. Louis and her Western sisters? It does not appear to us difficult to sustain, by facts and reason, the superior claims in this respect of our Western towns. It should be borne in mind that the North American Valley embraces the climate, soils, and minerals usually found distributed among many nations. From the northern shores of the upper lakes, and the highest navigable points of the Mississippi and Missouri rivers, to the Gulf of Mexico, nearly all the agricultural articles which contribute to the enjoyment of civilized man are now, or may be, produced to supply any demand. The North will send to the South grain, flour, provisions, including the delicate fish of the lakes, and the fruits of a temperate clime, in exchange for the sugar, rice, cotton, tobacco, and the fruits of the warm South. These are but a few of the articles, the produce of the soil, which will be the subjects of commerce in this valley. Of mineral productions which, at no distant day, will tend to swell the tide of internal commerce, it will suffice to mention coal, iron, salt, lead, lime, and marble. Will Boston, or New York, or Baltimore, or New Orleans, be the point selected for the interchange of these products? Or shall we choose more convenient central points on rivers and lakes for the theaters of these exchanges?

It is imagined by some that the destiny of this valley has fixed it down to the almost exclusive pursuit of agriculture, ignorant that, as a general rule in all ages of the world, and in all countries, the mouths go to the food, and not

the food to the mouth. Dr. Chalmers says: "The bulkiness of food forms one of those forces in the economic machine, which tend to equalize the population of every land with the products of its own agriculture. It does not restrain disproportion and excess in all cases; but in every large State it will be found that wherever an excess obtains, it forms but a very small fraction of the whole population. Each trade must have an agricultural basis to rest upon; for in every process of industry, the first and greatest necessity is that the workmen shall be fed." Again; "Generally speaking, the *excrecent* (the population over and above that which the country can feed) bears a very minute proportion to the natural population of the country; and almost nowhere does the commerce of a nation overleap, but by a very little way, the basis of its own agriculture." The Atlantic States, and particularly those of New England, cannot claim that they are to become the seats of the manufactures with which the West is to be supplied; that mechanics, and artisans, and manufacturers are not to select for their place of business the region in which the means of living are most abundant, and their manufactured articles in greatest demand, but the section which is most deficient in those means, and to which their food and fuel must, during their lives, be transported hundreds of miles, and the products of their labor be sent back the same long road for a market.

Such a claim is neither sanctioned by reason, authority, nor experience. The mere statement exhibits it as unreasonable. Dr. Chalmers maintains that the "excrecent" population could not, in Britain even, with a free trade in bread-stuffs, exceed one-tenth of all the inhabitants; and Britain, be it remembered, is nearer the granaries of the Baltic than is New England to the food-exporting portions of our valley, and she has also greatly the advantage in the diminished expenses of transportation. But the Eastern manufacturing States have already nearly, if not quite, attained to the maximum ratio of excrecent population, and cannot, therefore, greatly augment their manufactures without a correspondent increase in agricultural production.

Most countries, distinguished for manufactures, have laid the foundation in a highly improved agriculture. England, the north of France, and Belgium have a more productive husbandry than any other region of the same extent. In these same countries are also to be found the most efficient and extensive manufacturing establishments of the whole world; and it is not to be doubted that abundance of food was one of the chief causes of setting them in motion. How is it that a like cause operating here will not produce a like effect? Have we not, in addition to our prolific agriculture, as many and as great natural aids for manufacturing as any other country? The water-power of Missouri alone is greater than that of New England; besides, there are immense facilities in the States of Kentucky, Minnesota, and Ohio, as well as valuable advantages possessed in all the Valley States. But to these water-powers can be added the immeasurable power of steam in developing manufacturing industry in our own as well as other States of this Valley.

If our readers are satisfied that domestic or internal trade must have the chief agency in building up our great American cities, and that the internal trade of the great Western Valley will be mainly concentrated in the cities situated

within its bosom, it becomes an interesting subject of inquiry how our leading interior city will, at some distant period—say one hundred years—become the great city of the world, and gather to itself the preponderance of the industry and trade of the continent.

But our interior cities will not depend for their development altogether on internal trade. They will partake, in some degree, with their Atlantic and Pacific sisters, of the foreign commerce also; and if, as some seem to suppose, the profits of commerce increase with the distance at which it is carried on, and the difficulties which nature has thrown in its way, the Western towns will have the same advantage over their Eastern rivals in foreign commerce, which some claim for the latter over the former in our domestic trade. St. Louis and her lake rivals may use the outports of New Orleans and New York, as Paris and Vienna use those of Havre and Trieste; and it will surely one day come to pass that steamers from Europe will enter our great lakes and be seen booming up the Mississippi.

To add strength and conclusiveness to the above facts and deductions, do our readers ask for examples? They are at hand. The first city of which we have any record is Nineveh, situated on the Tigris, not less than 700 miles from its mouth. Babylon, built not long after, was also situated far in the interior, on the river Euphrates. Most of the great cities of antiquity, some of which were of immense extent, were situated in the interior, and chiefly in the valleys of large rivers meandering through rich alluvial territories. Such were Thebes, Memphis, Ptolemais and Rome.

But when we consider that our position in vindication of the superior growth of interior cities over outports is sustained by the civilization of the ancient nations, as found in the examples of their great interior cities, and that, too, when water facilities ruled the commerce of the world, must not all opposing argument in favor of seaboard cities be of naught when we bring to the discussion the power and use of steam, the railway system, and the labor-saving and labor-increasing inventions which the arts afford? Comprehending this mighty reversal in the order and means of industrial civilization, must we not say with Horace Greeley, that "salt water is about played out."

Of cities now known as leading centers of commerce, a large majority have been built almost exclusively by domestic trade. What country has so many great cities as China—a country, until lately, nearly destitute of foreign commerce?

There are now in the world more than 300 cities containing a population of 50,000 and upwards; of these more than two-thirds are interior cities, containing a population vastly greater than belongs to the outport cities. It should, however, be kept in mind that many of the great seaports have been built, and are now sustained, mainly by the trade of the nations respectively in which they are situated. Even London, the greatest mart in the world, is believed to derive much the greater part of the support of its vast population from its trade with the United Kingdom. At the present time not one-fifteenth of the business of New York city is based upon foreign commerce, but is sustained by the trade growing out of our home industry.

Though the argument is not exhaustive, it is conclusive. It is founded in the all-directing under life-currents of human existence upon this planet, and from its principles there is neither variableness nor shadow of turning away. Man's home is upon the land; he builds his master-works upon its sure foundations. It is upon the land that he invents, contrives, plans and achieves his mightiest deeds. He spreads his sails upon the seas and battles with the tempest and the storm; and amid the sublimities of the ocean he travels unknown paths in search of fame. The ephemeral waves obliterate the traces of his victories with the passing moments; upon the land, time alone can efface his works.

The organization of society as one whole is yet too imperfect to call for the use of one all-directing head and one central moving heart, and it will only be the ultimate, the final great city, that will fully unite in itself the functions analogous to those of the human head and heart, in relation to the whole family of man.

The center of this great commercial power will also carry with it the center of the moral and intellectual power. One hundred years, at our previous rate of increase, will give more than four duplications, and more than six hundred millions of people, to the present area of our country. But, allowing twenty-five years for a duplication, and four duplications, we should have six hundred millions at the close of one hundred years. Of these, not less than four hundred millions will inhabit the interior plain and the region west of it; and not over two hundred millions will inhabit the margin east of the Appalachian mountains. The productions of these four hundred millions, intended for exchange with each other, will meet at the most convenient point central to the place of the growth or manufacture of their products. Where, then, let us inquire again, is most likely to be the center of the most ample and best facilities for the exchange, in the future, of the commodities of that great people? Where will that point be? Which of the four cities we have under consideration is best suited for this great purpose? Must it not be St. Louis, commanding, as she will, the greatest railway and river communication? It cannot be a lake city, for neither of them can command, with so great advantage, the great surplus products of the country. It cannot be Cincinnati, for she is not so well situated in the center of the productive power of the continent. It cannot be New Orleans; higher freights upon the products of the country will be against her. It cannot be New York nor San Francisco, for all our six fundamental facts stand against them, and unerringly point to the central plain of the continent, where the six hundred millions of people will prefer to transact business.

We have seen that the human race, with all its freight of commerce, its barbarism and civilization, its arms and arts, through pestilence and prosperity, across seas and over continents, like one mighty caravan, has been moving forward since creation's dawn, from the East to the West, with the sword and cross, helmet and distaff, to the conquest of the world; and, like a mighty army, leaving weakness behind and organizing power in the advance. Hence, we can easily realize that the same inevitable cause that wrested human power

from the cities of the ancients, and vested it for a time in the city of the Cæsars, and thence moved it to the city of London, will, in time, cross the Atlantic Ocean, and be organized and represented in the future great city of the world, which is destined to grow up on the American Continent; and that this power, wealth and wisdom, that once ruled in Troy, Athens, Carthage, and Rome, and are now represented by the city of London—the precursor of the final great city—will, in less than one hundred years, find a resting place in North America, and culminate in the future great city which is destined to grow up in the central plain of the Continent, and upon the great Mississippi river, where the city of St. Louis now stands.

I know there are those who assume that New York is to be the successor of London, and even surpass in population and commercial supremacy that great city of the trans-Atlantic shore, before the position of the final great city is fixed. This is not possible. We have only to comprehend the new character of our national industry, and the diversity of interests which it and our rapidly increasing system of railways are establishing, to know that it is impossible. The city of New York will not, in the future, control the same proportionate share of foreign and domestic commerce of the country, that she heretofore has. New Orleans and San Francisco will take some of the present valued trade, and, together with other points which will soon partake of the outpost commerce, the trade to and from our country will be so divided as to prevent New York from becoming the rival, much less the superior, of London, as Mr. Scott has so earnestly contended. Then, in the westward movement of human power and the center of the world's commerce, from the city of London, to the New World, it is not possible for it to find a complete and final resting place in any city of the Atlantic seaboard, but it will be compelled to move forward, until, in its complete development, it will be organized and represented in the most favored city in the central plain of the Continent. Besides the diffusion of our external commerce through so many channels upon our seaboard, so as to prevent its concentration at any one of the seaboard cities, there are elements at work in the interior of the country, which will more surely prevent the city that is to succeed London from growing up on the Atlantic shore of our Continent. Every tendency of our national progress is more and more to our continental development—a living at home, rather than going abroad to distant markets. There is an inherent principle lurking among all people of great continental nationality and resources, which, impresses them stronger with home interests than with external and distant fields of action; and this principle is rapidly infusing itself among the people of these great valley States; therefore, it is needless to look into the future to see our great cities on either seaboard of our Continent, for they are not destined to be there. But most certainly will they grow up in the interior, upon the lakes, the rivers, and the Gulf; and among these cities of the interior we are to look for the future great city of the world—that which London now heralds, and which the westward tendency of the world's civilization will in, less than one hundred years, build up as the greatest industrial organism of the human race.

Human power is not only moving westward from the old world, but it is

also moving from the Atlantic seaboard, westward. But a few facts are necessary to demonstrate the truth of this statement: First, in evidence that human power is moving westward from the old world, we have but to refer to the reports of the State Department at Washington upon our foreign commerce, to learn that our imports are greater than our exports, and our internal commerce far greater than our foreign commerce; and by reference to the various reports on emigration, we learn that thousands are coming from Western Europe, yearly, to our shores, while but few of our own people are seeking homes on the other side of the Atlantic. Second, in evidence of the westward movement of human power from the Atlantic States, the following statistical facts are given; and although our tables show, in the most conclusive manner, that human power is moving westward, yet since they were made up, many thousands of new miles of railways have been added to the great system of the Mississippi Valley, and at least three-fifths of the number of miles of railways of the entire country are now in the Valley of the Mississippi.

Nor can these facts, in their magnitude and character, be considered of casual concern to the American citizen; for they are the most important in our national progress. They are the irrefutable evidences of the historic and sublime march of the American people, in the course of the star of empire in its majestic career across the continent.

The following Table will show the number of miles of railroad in operation in the United States for each year since 1830, also the ratio of such mileage to the area and the population of the several States.

Year.	Miles in Operation.	Annual Increase of Mileage.	Year.	Miles in Operation.	Annual Increase of Mileage.
1830.....	23	...	1851.....	10,982	1,961
1831.....	95	72	1852.....	12,908	1,926
1832.....	229	134	1853.....	15,390	2,482
1833.....	340	151	1854.....	16,720	1,330
1834.....	633	253	1855.....	18,374	1,654
1835.....	1,098	265	1856.....	22,017	3,643
1836.....	1,273	175	1857.....	24,508	2,491
1837.....	1,497	224	1858.....	26,968	2,460
1838.....	1,913	416	1859.....	28,789	1,821
1839.....	2,302	389	1860.....	30,635	1,846
1840.....	2,818	515	1861.....	31,256	621
1841.....	3,535	717	1862.....	32,120	864
1842.....	4,026	491	1863.....	33,170	1,050
1843.....	4,185	159	1864.....	33,908	738
1844.....	4,377	192	1865.....	35,185	1,277
1845.....	4,633	256	1866.....	37,017	1,832
1846.....	4,939	297	1867.....	39,244	2,227
1847.....	5,599	669	1868.....	42,277	3,033
1848.....	5,996	397	1869.....	47,254	4,999
1849.....	7,365	1,369	1870.....	53,349	6,145
1850.....	9,021	1,656	1871.....	60,852	7,453

STATISTICAL STATEMENT.

Showing the Area, Population, and Assessed Valuation of the States and Territories of the United States of America, June 1, 1860, and June 1, 1870; and the Railroad Mileage therein January 1, 1862, and January 1, 1872, comparatively:

STATES AND TERRITORIES.	Area in square miles.	Population.		Assessed Valuation.		Miles of R. R.	
		1860.	1870.	1860.	1870.	1862.	1872.
States.							
1. Alabama.....	50,722	964,201	996,992	\$432,198,762	\$155,582,595	805	1,671
2. Arkansas.....	52,138	435,450	484,471	180,211,330	94,528,843	38	258
3. California.....	188,981	379,391	560,247	139,654,667	269,644,068	23	1,013
4. Connecticut.....	4,674	460,147	537,454	341,256,976	425,433,237	630	820
5. Delaware.....	2,120	112,216	125,015	39,929,685	64,787,223	127	227
6. Florida.....	59,268	140,424	187,748	68,929,685	32,480,843	402	460
7. Georgia.....	58,009	1,057,286	1,184,109	618,232,387	227,219,519	1,420	2,108
8. Illinois.....	55,410	1,711,951	2,539,891	389,207,372	482,899,575	2,988	5,994
9. Indiana.....	33,809	1,350,428	1,680,637	411,042,424	663,455,044	2,175	3,523
10. Iowa.....	55,945	674,913	1,191,792	205,166,985	302,515,418	731	3,100
11. Kansas.....	81,318	107,209	364,339	22,518,232	92,125,861	...	1,760
12. Kentucky.....	37,600	1,155,684	1,321,011	528,212,693	409,544,294	567	1,123
13. Louisiana.....	41,346	708,002	726,915	435,787,265	253,371,890	335	539
14. Maine.....	31,776	628,279	626,915	154,880,388	204,253,780	505	871
15. Maryland.....	11,184	687,049	780,894	297,135,218	423,834,918	408	820
16. Massachusetts.....	7,800	1,231,066	1,457,351	777,157,816	1,591,983,112	1,285	1,606
17. Michigan.....	56,451	749,113	1,184,059	163,533,005	272,242,917	853	2,235
18. Minnesota.....	83,531	172,023	439,766	32,018,773	84,135,332	...	1,612
19. Mississippi.....	47,156	791,305	827,922	509,472,912	177,278,890	562	990
20. Missouri.....	65,350	1,182,012	1,721,205	266,985,851	556,119,969	838	2,530
21. Nebraska.....	75,995	28,841	122,993	7,426,949	54,584,616	...	828
22. Nevada.....	112,090	6,857	42,491	...	25,740,973	...	593
23. N. Hampshire.....	9,250	326,073	318,300	123,810,089	149,065,290	661	790
24. New Jersey.....	8,320	672,035	906,096	296,682,492	624,868,971	633	1,265
25. New York.....	47,000	3,800,735	4,382,759	1,296,464,638	1,967,001,185	2,728	4,470
26. North Carolina.....	50,704	992,622	1,071,361	292,297,002	130,378,622	937	1,190
27. Ohio.....	39,964	2,339,511	2,665,260	959,869,101	1,167,731,697	3,100	3,740
28. Oregon.....	95,214	52,465	90,923	19,024,915	31,798,510	4	159
29. Pennsylvania.....	46,000	2,906,215	8,521,791	719,253,335	1,319,236,042	3,006	5,113
30. Rhode Island.....	1,306	174,620	217,353	125,104,305	244,278,854	108	136
31. South Carolina.....	29,385	703,708	705,606	489,319,128	183,913,337	93	1,201
32. Tennessee.....	45,600	1,109,801	1,258,520	362,495,200	253,782,161	1,253	1,520
33. Texas.....	257,504	604,215	818,579	267,792,334	149,732,929	451	865
34. Vermont.....	10,212	315,098	330,551	84,758,619	102,548,528	562	675
35. Virginia.....	40,904	1,219,630	1,225,163	657,021,336	365,439,917	1,379	1,490
36. West Virginia.....	23,009	376,688	442,014	...	140,538,273	361	485
37. Wisconsin.....	53,924	775,881	1,064,670	156,226,169	333,209,838	961	1,725
TOTAL STATES.....	1,950,171	31,183,744	38,113,253	\$11,984,576,538	\$14,021,297,071	32,120	59,587
Territories.							
1. Arizona.....	113,916	...	9,658	...	\$1,410,295	...	...
2. Colorado.....	104,500	34,277	39,864	...	17,338,101	...	392
3. Dakota.....	147,490	4,837	14,181	...	2,924,489	...	...
4. Dist. of Columbia	69	45,083	131,700	41,084,945	74,271,693	...	...
5. Idaho.....	90,932	...	14,999	...	5,292,205	...	...
6. Montana.....	143,776	...	20,595	...	9,943,411	...	...
7. New Mexico.....	121,201	93,516	91,874	20,838,780	17,784,014	...	...
8. Utah.....	80,656	40,273	86,786	4,158,120	12,565,842	...	375
9. Washington.....	69,994	11,594	23,955	4,394,735	10,642,863	...	...
10. Wyoming.....	93,107	...	9,113	...	5,516,748	...	498
TOTAL TERRITORIES.....	995,032	259,577	442,730	\$70,476,580	\$157,689,061	...	1,265
Aggregate, U. S.....	2,915,203	31,443,321	38,555,983	\$12,055,053,118	\$14,178,986,732	32,120	60,852

The above table, with some slight changes, is taken from Mr. Poor's *Railroad Manual* for 1870-1. In some particulars it is incorrect. It falls short in giving the present population of the country. Our present census will show us to have more than 42,000,000 inhabitants. It is estimated that our present railway system, as exhibited by the above table, cost \$42,000,000,000, which is the annual value of the commerce of our Western rivers.

*Included in the railroad mileage of Maryland.

STATISTICAL TABLE,

Prepared from the United States Census Reports, showing the controlling Power and Progress of the Mississippi Valley.

DESCRIPTION OF RESOURCES.	ATLANTIC SLOPE.		MISSISSIPPI VALLEY.		PACIFIC SLOPE.	
	1850.		1850.		1850.	
	1850.		1850.		1850.	
Population.....	13,255,254	15,403,802	9,813,117	14,983,427	107,271	491,153
Area, square miles.....	323,197	423,197	1,809,811	1,809,811	627,256	927,256
Land improved in farms, acres.....	63,955,491	73,882,533	48,885,479	87,034,199	181,694	3,537,668
Land unimproved in farms, acres.....	84,958,934	93,679,468	90,736,918	142,597,264	4,191,998	7,763,630
Cash value of farms.....	\$1,941,599,378	\$3,132,661,500	\$1,232,941,038	\$3,446,702,533	\$6,033,010	\$97,780,934
Value of farming implements and machinery.....	\$78,226,805	\$101,820,439	\$72,389,639	\$134,292,513	\$371,194	\$2,985,091
Live stock, horses.....	1,441,447	2,034,209	2,460,078	3,987,645	32,194	207,230
" asses and mules.....	760,785	270,187	386,128	611,056	2,411	5,805
" milch cows.....	3,435,181	3,194,657	2,431,345	4,430,022	18,568	281,151
" working oxen.....	816,236	4,755,084	866,348	1,782,965	18,160	45,832
" other cattle.....	4,619,672	4,615,368	5,372,321	9,099,605	280,276	1,075,314
" sheep.....	10,063,775	8,701,355	11,013,228	12,634,001	36,218	1,221,919
" swine.....	10,167,805	9,767,182	20,132,783	23,231,201	33,925	554,672
Value of live stock.....	\$280,479,888	\$502,975,639	\$257,926,113	\$617,616,940	\$5,774,215	\$94,325,528
Wheat, bushels.....	47,639,178	53,496,897	48,474,581	102,067,352	336,973	7,129,939
Rye, bushels.....	12,805,283	15,257,185	1,382,214	4,498,375	316	57,844
Indian corn, bushels.....	180,029,335	201,688,663	359,912,515	636,436,595	25,053	682,486
Oats, bushels.....	82,895,111	98,216,034	63,686,947	72,350,255	75,114	2,130,366
Clats, bushels.....	205,438,416	178,427,058	9,874,081	7,730,807	.....	3,565
Rice, pounds.....	94,102,263	215,472,060	105,646,057	218,732,827	1,385	136
Tobacco, pounds.....	27,839,015	1,278,016	1,945,178	4,108,270	.....	2,997,035
Ginned cotton, bales, 400 lbs. each.....	27,839,015	26,302,154	24,881,022	30,765,734	44,428	213,351
Peas and beans, bushels.....	4,606,433	8,585,435	3,314,121	6,253,269	9,147	2,493,063
Irish potatoes, bushels.....	46,606,072	67,406,473	19,016,138	39,749,331	114,586	2,493,063
Sweet potatoes, bushels.....	19,831,753	21,831,412	19,432,763	20,488,724	1,000	214,800
Barley, bushels.....	7,416,763	1,069,416	1,632,711	3,238,665	11,511	4,457,897
Buckwheat, bushels.....	13,027,306	1,632,711	1,632,711	4,180,386	352	80,411
Value of orchard products.....	\$5,283,404	\$10,037,406	\$2,743,101	\$8,072,064	\$14,371	\$1,262,615
Wine, gallons.....	77,861	10,037,406	1,081,157	1,081,157	38,063	249,360
Value of market garden produce.....	\$3,005,095	\$10,391,915	\$1,827,333	\$1,827,333	\$189,354	\$1,273,904
Butter, pounds.....	200,161,691	257,882,940	111,058,994	167,277,132	235,478	4,572,630
Cheese, pounds.....	80,042,317	73,239,325	25,124,948	26,429,167	68,158	4,024,545
Hay, tons.....	10,215,393	10,696,040	3,306,028	6,822,167	7,216	859,769

But granting that human power is moving westward, on this continent, a question arises, as to whether, in time, it will be arrested and make a lodgement somewhere in North America, or whether it cross the Pacific Ocean to the inferior races of Asia.

To answer this question we have only to reconsider the vast material resources of North America, and realize that they are far more inviting to capital and skill, than any inducements that Asia can offer. This fact is so palpable that it requires no argument, and therefore must settle the question of the arrest of human power, in its westward movement on this continent. Nor will it reach and make a lodgement on the Pacific Slope.

The vast arid and mountainous regions of the western half of the continent, and the unequalled extent of fertile lands on the eastern half of the continent, and adjacent to and on either side of the great river, fixes its location inevitably in the central plain of the continent; and in the center of its productive power. And with the development and complete organization of human power in the center of the productive power of the continent, will most certainly grow up the great city of the future—the great material, social, civil, and moral heart of the human race. The raw materials necessary to the artisan and the manufacturer, in the production of whatever ministers to comfort and elegance, are here. The bulkiness of food and raw minerals make it to the interest of the artisan and the manufacturer to locate themselves near the place those materials grow. It is this interest, constantly operating, which peoples our Western towns and cities with emigrants from the Eastern States and Europe. When food and raw materials for manufacture are no longer cheaper in the great valley than in the States of the Atlantic and the nations of Western Europe, then, and not till then, will it cease to be to the interest of artisans and manufacturers to prefer a location in Western towns and cities. This time will probably be about the period when the Mississippi shall flow toward the Arctic regions.

The chief points for the exchange of the varied productions of industry in the Mississippi valley will necessarily give employment to the great population. Indeed, the locations of our future great cities have been made with reference to their commercial capabilities. Commerce has laid the foundation on which manufactures have been, to a great extent, instrumental in rearing the superstructure. Together, these departments of labor are destined to build up in this fertile valley the greatest cities of the world.

It is something to us Americans that the great city, the great all-directing heart of the race, is to grow up in our land. Even to us of this generation, a conviction of the final growth of great marvel of future ages is a thought which we can indulge and enjoy with pride, in the present and coming conflicts of this progressive life. As we have already seen, St. Louis is substantially central to the Mississippi Valley, and no city on the continent can lay any just claim to become the future great city, and occupy a central position to so many valuable resources as she does. She is not only substantially in the center of the Mississippi Valley, but, allowing her to be nine hundred miles from New York City, she occupies the center of an area of 2,544,688 square miles, and

within a circumference the outer line of which touches Chicago. She occupies the center of an area of country which, in fertility of soil, coal, iron, timber, stone, water, domestic navigation, and railways, cannot be equaled on the globe.

Not only so, but when we consider by what general rules, the cities have grown, and are now growing on this continent, we must conclude that St. Louis, still occupies the most favorable position for greatness and power.

Let us look at this for one moment. Leaving the Atlantic sea board, we observe that the cities of the continent have been erected within belts or zones. The most central and important of which are

THE CITIES OF THE RIVER ZONE.

This zone embraces the belt of country between the mouth of Chesapeake Bay and the lower end of Long Island Sound, and extending westward to the head waters of the Republican, Smoky Hill and Arkansas. Within this belt of country is embraced most of the internal navigation and river of the United States, and upon the rivers included within it, now exist the cities of the river zone. They occupy the most favored localities of any cities in the United States.

THE CITIES OF THE LAKE ZONE.

On the north have been founded the cities of the Lake zone. They have been built along the line of the Lakes, from east to west, to the upper Mississippi, and from a very important chain of commercial cities, but never can equal in wealth and power the cities of the river zone.

THE CITIES OF THE GULF ZONE.

On the South has been founded the cities of the Gulf zone. They have been built along, and adjacent to the gulf from east to west, to the Rio Grande. The cities of this zone, though they will never grow so powerful as those in the River and Lake zone; they will grow wealthy, and be noted for refinement and social character.

These three zones represent the manner in which the cities of the country grew up, under the first movement of civilization across the continent from east to west; but now that the Pacific shore has been reached by the pioneer, and great army of civilization, and neither can go beyond, a new and second movement is now being inaugurated, and new city zones will soon define themselves. They will be the Atlantic zone, embracing the cities of the Atlantic coast, from the mouth of the St. Lawrence to Cape Florida. The next zone of cities under the new movement of civilization on the continent, will be the zone at the Mississippi Valley, extending from Hudsons Bay to the Gulf of Mexico. Within this zone, in time, will exist more great cities than any nation of the earth will have. Beyond this is the zone of the Pacific. This zone will embrace all the cities of the Pacific Slope.

Intermediately, between the zone of the Mississippi Valley and the Pacific zone, is the mountain and plateau region, the land of religion and conflicting ideas. To this region will belong many cities of splendor and wealth.

Now to the application. Take the city zones under the first or second order of civilization on the continent, and in either case, St. Louis possesses supreme advantages over any other city in North America. And especially will her advantages be greater under the new, or second order of civilization, which will as surely compel all the cities of the valley, to go out at the mouth of the Mississippi to the Gulf, and to the world. Chicago, no doubt, is not ready to accept such a destiny, but no matter, she will. She too, with Cincinnati and St. Louis, must follow the flow of the waters to the Gulf. This will establish St. Louis as the great continental, distributing point, the depot and the entrepot for the great bulk of the commerce of the country.

The immense accommodation of railroads will, by rapid, cheap, and easy communication, draw to great centers from great distances around, and thus the great cities of the world will continue to grow until they reach a magnitude hitherto unknown; and, above them all, will St. Louis reap the rich rewards of modern discoveries and inventions, especially as regards steam and all its vast and varied influence.

But let us pass on: Cities like individuals, have a law of growth, that may be said to be constitutional and inherent, and yet the law governing the growth of cities, does not seem to be sufficiently understood to furnish a basis for calculating their growth to any considerable time in the future. In the development of a nation, and country, new agencies are continually coming into the account of growth and work, either favorable or unfavorable. The growth of cities is somewhat analogous to the pursuits of business men: some move rapidly forward in the accumulation of wealth, to the end of life; others only for a time are able to keep even with the world. So, too, in the growth of cities; and thus it is difficult to calculate with exactness their future growth. Cities grow with greater rapidity than nations and States, and much sooner double their population; and, with the constantly increasing tendency of the people to live in cities, we can look with greater certainty to the early triumph of our inland cities over those of the seaboard; for, so surely as the population of the Valley States doubles that of the seaboard States, so surely will their cities be greater. The city of London, now the greatest in the world, having more than three million people, has only doubled its population every thirty years, while New York has doubled every fifteen years. According to Mr. J. W. Scott, London grows at an average annual rate, on a long time, of two per cent.; New York, at five; Chicago, at twelve and one-half; Toledo, twelve; Milwaukee, Detroit, Cleveland, Cincinnati, Buffalo, and St. Louis, at the rate of eight per cent. Mr. Scott gives these calculations as approximately true for long periods of time. They may be essentially true in the past, but cannot be relied on for the future; for, as I have already said, the growth of a city is as uncertain as a man's chance is in business—he may pass directly on to fortune, or may be kept back by the fluctuations of the markets, or greater hindrances interposed by wars. Touching the subject of climate, I shall not deem it of

sufficient bearing upon this subject to enter into a nice discussion of the influence of heat and cold upon man in civilized life, in the north temperate zone of the North American continent. All experience teaches that there is not sufficient variation of the climate throughout the middle belt of our country to adversely affect the highest and greatest purposes of American industry and American civilization. The same rewards and the same destiny await all. The densest population of which we have any record is now, and has been for centuries, on the thirtieth degree of north latitude; and if such can be in China, why may it not be in America?

Again, returning to our first fundamental fact, that human power is moving westward from the city of London, we must calculate that that great city will be succeeded by a rival, one which will grow up in the new world, and that this new city will result in the final organization of human society in one complete whole, and the perfect development and organization of the commerce of the world; will grow to such magnificent proportions, and be so perfectly organized and controlled in its municipal governmental character, as to constitute the most perfect and greatest city of the world—the all-directing head and heart of the great family of man. The new world is to be its home, and nature and civilization will fix its residence in the central plain of the continent, and in the center of the productive power of this great valley, and upon the Mississippi river, and where the city of St. Louis now stands. All arguments point to this one great fact of the future, and, with its perfect realization, will be attained the highest possibility in the material triumph of mankind.

Let us comprehend the inevitable causes which God and civilization have set to work to produce, in time, this final great city of the world, in our own fair land; and, with prophetic conception, realizing its final coming, let us hail it as the master-work of all art and the home of consummated wisdom, the inheritance of organic liberty, and a city to be controlled by an all-pervading social order that will insure a competency to every member of the in-gathered family.

Henceforth St. Louis must be viewed in the light of her future, her mightiness in the empire of the world, her sway in the rule of States and nations. Her destiny is fixed. Like a new-born empire, she is moving forward to conscious greatness, and will soon be the world's magnet of attraction. In her bosom all the extremes of the country are represented, and to her growth all parts of the country contribute. Mighty as are the possibilities of her people, still mightier are the hopes inspired. The city that she now is, is only the germ of the city that she will be, with her ten million souls occupying the vast area of her domain. Her strength will be that of a nation, and, as she grows toward maturity, her institutions of learning and philosophy will correspondingly advance. If we but look forward, in imagination, to her consummated greatness, how grand is the conception! We can realize that here will be reared great halls and edifices for art and learning; here will congregate the great men and women of future ages; here will be represented, in the future, some Solon and Hamilton, giving laws for the higher and better government of the people; here will be represented some future great teachers of religion,

teaching the ideal and spiritual development of the race, and the higher allegiance of man to the angel world; here will live some future Plutarch, who will weigh the great men of his age; here some future "Mozart will thrill the strings of a more perfect lyre, and improvise grandest melodies" for the congregated people; here some future "Rembrandt, through his own ideal imagination, will picture for himself more perfect panoramic scenes of nature's lovely landscapes." May we not justly rejoice in the anticipation of the future greatness of the civil, social, industrial, intellectual, and moral elements which are destined to form a part of the future great city? And may we not realize that the millions who are yet to be its inhabitants will be a wiser and better people than those of this generation, and who, in more perfect life, will walk these streets, in the city of the future, with the softer tread, and sing music with sweeter tones, be urged on by aspirations of higher aims, rejoice with fuller hearts, and adorn in beauty, with more tender hands, the final great city of the world?

THE AUXILIARY ARGUMENTS AND EVIDENCE.

THE GEOGRAPHICAL, GEOLOGICAL AND TOPOGRAPHICAL SITUATION OF THE CITY OF ST. LOUIS.

The city of St. Louis is situated, geographically, very nearly in the center of the great Valley of the Mississippi, or basin of the continent, on the west bank of the Mississippi river, and about half way between St. Paul and New Orleans, and Pittsburg and Denver City.

The topography of St. Louis county consists of a system of ridges branching from a water-shed between the Missouri, Meramec and Mississippi rivers. This water-shed has a general altitude of two hundred feet above the Mississippi river, and has numerous small ridges or arms branching from it and winding in serpentine courses, and maintaining this general altitude along their summits, and terminating in bluffs or low escarpments and declining grounds towards the Meramec, Missouri and Mississippi rivers.

The city is built geographically on the ends or termination of this ridge system, and extends some twelve miles up and down the river, the ground rising gently from the river back for one mile to Seventeenth street, which follows in part the apex of the first ridge, and is one hundred and fifty feet above the river. The ground then gently declines, and rises in a second ridge at Twenty-fifth street, or Jefferson avenue, and parts of Grand avenue, and again slopes and rises in a ridge at Cote Brillante, or Wilson's Hill, four miles west of the river. This point is some two hundred feet above the river, and overlooks the city.

Looking at the topography of the site which St. Louis now occupies, the observer will be most intensely impressed with the thought that nature in her immutable decrees had ordained, from the beginning, that here she laid the foundation for a great city—the future imperial city of the world. Nor are the character and superiority of the land circumscribed by the present city limits—not at all. The same beauty in the general formation and adaptability of the ground for building purposes, and the consequent expansion of the city, extends back in every way from the river for an indefinite distance, and with still greater advantages for building purposes as we advance into the country.

The geological formation of St. Louis county is limestone, shales and sandstones of the coal measures, these being covered with alluvial clays from ten to twenty feet deep, making the contour of the ridges wavy and dividing the country into rich rolling prairie, from one to two hundred feet above the rivers, and bordered with belts and groves of black and white oak woods; and the country shows many substantial brick mansions, highly-cultivated farms, vine-yards, orchards, meadows, slopes—forming the most natural grounds for

building purposes found in any part of our country. Viewing this rolling prairie, with all its wealth of alluvial soil, its contour of ridge and valley, its springs and meandering streams, it seems as if the laws of nature had here amassed their wealth, and centralized the material resources to supply the wants of a dense and wealthy population; and, not being content with this wealth of soil and art on the surface, had underlaid a large part of this area with coal veins, St. Louis county containing an undeveloped coal basin of over 10,000 acres.

While New York is limited to a barren, rocky island, Philadelphia to a low ridge between the Delaware and Schuylkill rivers, Washington City to a flat, sterile, uninteresting region, Chicago to land from five to fifteen feet above Lake Michigan, and swampy prairie beyond, Cincinnati to a small circuit surrounded by steep, rocky hills, St. Louis has the most natural contour of surface for elevation of residence streets—deep clay over the limestone for brick, cellars, sewerage, and foundations, quarries of building rock in all parts of the city, wells of pure water in the deep clays in many parts of the city, natural sewerage and dome-shaped hills for waterworks, and essentially combining all the material resources for a great city. London and Paris are built upon tertiary basins, where the soil is thin and rocks generally too soft for good building material. Grand avenue is twelve miles long, running parallel with the river, and forming a grand Broadway from the north to the south end of the city, and is destined in the future, with its fair-grounds, its great parks, cathedrals, churches, waterworks, and private residences, to be the boulevard of the Western continent. And yet, when this has been said, we have but commenced to tell of the wonders of a city destined in the future to equal London in its population, Athens in its philosophy, art and culture, Rome in its hotels, cathedrals, churches and grandeur, and to be the central commercial metropolis of a continent.

It may be asked, how shall we have cognizance of the laws to give us faith in this being accomplished? Go, then, in imagination, ninety miles south of the city, over the railroad to the Iron Mountains, where is stored above the level of the valleys, iron ore sufficient to supply the wants of a densely-populated continent. One thousand tons of this ore now comes daily, over a down grade of seven hundred feet, to St. Louis. In another year a double track railroad will be needed. Flanking this iron system are 10,000,000 acres of iron, lead, copper, zinc, antimony, nickel, tin, silver and gold regions; west of this are another 10,000,000 acres, including Southwest Missouri, being fields of similar ores, and part coal. This, you will bear in mind, is south of the city.

Now, let us look east. The four great trunk railroads leading east at ten miles from the city reach the coal measures, run each over two hundred miles of the great Illinois coal basin, where five or six coal veins are piled one vein above the other. To the north this same coal system is found, and all the railroads in North Missouri are crossing more or less over coal veins. To the West, the great trunk Pacific railroad, beyond Jefferson City, crosses over vast coal-fields, Kansas City being built centrally in this great field.

Coal and iron are the bones and sinews of the most powerful of modern na-

tions. Lead, zinc, and copper add strength. In the future, the country to pay tribute to this center are the vast cotton-fields of the lower Mississippi, the grain-growing regions of the North and West, the argentiferous and auriferous belts of Colorado and Montana.

St. Louis like ancient Rome, once with its 10,000,000 population, is destined to be flanked and surrounded with a galaxy or cordon of continental cities. Memphis, Kansas City, St. Joseph, Leavenworth, Dubuque, Keokuk, Davenport, Jacksonville, Springfield, Terre Haute, and Indianapolis are a part of these satellites that in the future are to pay tribute to this center—taking in view the fact of their vast material resources, and these being the center of the great fruit, agricultural and wine belt of the continent.

The people, the Teutonic and Celtic races, are the pioneer people in all the departments of human industry, politics, culture, theology. We apprehend that the most acute vision, even were that mind in harmony with the spirit of the times, and enabled through that means to look back through the dim geologic history of the past, when the economic laws were piling the iron, atom by atom, in these iron mountains, growing the dense flora of the coal plants, repleting the veins of lead, zinc, copper, tin, silver and gold, and at the same time comprehend the ridge, valley, spring, prairie, timber and river systems, and was enabled to go back in the ethnography and heraldry of these populations, and could fuse these elements or facts in the future, and at the same time realize the grandeur of the empires of the past—the Persian, under Cyrus; the Macedonian, under Alexander the Great; the Roman, under the Republic and the twelve Cæsars—that the truth would be forced upon the mind, that in the future this great Valley of the Mississippi will include the center of an empire, before which, in wealth, power and grandeur, all these shall pale; that St. Louis, sitting like a Queen on the banks of the great Father of Waters, will be the central city of this people, the tidal waves of whose civilization will roll to China and Japan on the west, and to the Bosphorus on the east; and with her continental railroad system, her telegraphs over mountains and under oceans, her vast water communication, will radiate law and order, and become the leading national, mining, and commercial metropolis of the Western hemisphere.

St. Louis, though in its infancy, is already a large city. Its length is about twelve miles, and its width from four to five. Suburban residences, the outposts of the grand advance, are now stationed six and eight miles from the river, and will soon be twenty. In 1865, the real and personal property of the city was assessed at \$100,000,000, and in 1866 at \$126,877,000. These figures, as well as the present assessment, \$147,968,070, are understood by our city officials to be much below the real value of the city.

St. Louis is a well-built city, but its architecture is more substantial than showy. The wide, well-paved streets, the spacious levee and commodious warehouses; the mills, machine shops and manufactories; the fine hotels, churches, and public buildings; the universities, charitable institutions, public schools and libraries, the growing parks, the well-improved and unequalled fairgrounds, and Mr. Shaw's jewel of a garden, which is by far the garden of the

continent, constitute an array of excellencies and attractions of which any city may justly be proud. The appearance of St. Louis from the eastern bank of the Mississippi is impressive. At East St. Louis the eye sometimes commands a view of one hundred steamboats lying at our levee. A mile and a half of steamboats lying at the wharf of a city 1,000 miles from the ocean, in the heart of a continent, is a spectacle which naturally inspires large views of commercial greatness. The sight of our levee, thronged with busy merchants and covered with the commodities of every clime, from the peltries of the Rocky Mountains to the teas of China, does not tend to lessen the magnitude of the impression.

These thoughts of the growth and commerce of St. Louis could easily be extended to a discussion of the wealth and industry of our continent, but the amplification would be of no avail to a people whose minds, like their eyes, are accustomed to range over large extents, and are not content to sit down after having acquired a little power.

POPULATION OF ST. LOUIS CONSIDERED.

The material growth of St. Louis, from its foundation by Pierre Laclede Liguest, on the 15th day of February, 1764, will ever furnish a historical lesson of varied interest to those who now and henceforth enroll themselves among its inhabitants.

"In 1790 a St. Louis merchant was a man who, in the corner of his cabin, had a large chest which contained a few pounds of powder and shot, a few knives and hatchets, a little red paint, two or three rifles, some hunting shirts of buckskin, a few tin cups and iron pots, and perhaps a little tea, coffee, sugar and spice. There was no post-office, no ferry over the river, no newspaper."

From its foundation to the date of the Louisiana purchase, in 1804, but little change was made in the character of its social society, and industrial interests. The ruder and rougher forms of life were everywhere impressed upon her people, and marked the growth of an infant city destined to be the future capital of the United States and the great city of the world. The Louisiana purchase at once fixed not only the destiny of the nation, but also of St. Louis. A change in the title of the land wrought a change in her material growth and prosperity. A newspaper was established in 1808; in 1809 fire companies were organized; in 1810 there were road-masters, who had power to compel the requisite labor to improve good highways; in 1811 two schools were established, one English, the other French; in the same year a market-house was built, and prosperity gradually awakened new life in the place, and pointed to a future full of hope.

A record of the population of St. Louis began to date in the year 1764, a little more than one hundred years ago, and the succeeding increase at different periods is shown by the following statement:

Years.	Population.	Years.	Population.
1764.....	120	1835.....	8,316
1780.....	657	1837.....	12,040
1785.....	807	1840.....	16,469
1788.....	1,197	1844.....	34,140
1790.....	925	1850.....	74,439
1811.....	1,400	1852.....	94,000
1820.....	4,928	1855.....	125,200
1828.....	5,000	1860.....	160,773
1830.....	5,852	1870.....	310,963
1833.....	6,397		

Dr. Scott, in fixing the annual average growth of cities, estimated that of St. Louis, previous to 1860, to be at an annual average rate of 8 per cent. But by the rapid change which has so recently swept over the country—abolishing slavery and equalizing labor alike in all sections of the country, and founding our prosperity alone upon the advantages which God has fixed throughout the land, St. Louis, in spite of the terrible ravages of four years of devastating war, has grown into the ascendancy, during the last ten years, at an annual average rate of a little more than nine per cent. But, if we allow a discount of two per cent. for decimations during the four years of war, we must, to attain the present population of the city, have well nigh increased annually at the rate of twelve per cent. since the war. This is almost equal to the increase of Chicago in the days of her precocious growth.

But during the past two years, St. Louis has grown, more rapidly than ever before. Her growth has been at the annual rate of at least 12 per cent. This would give her at the present time, taking the census of 1870, 310,963, as a basis, not less than 393,500, inhabitants.

And it is not unreasonable, in the absence of an actual census, to assume that her population, within the old corporate limits of 19, 9-10 square miles, does reach that number, at the present time; for no city to-day in the United States is growing in manufacturing industry as rapidly as St. Louis. Her railway system is expanding with immense rapidity. Her dry goods and grocery trade, is growing at the rate of 25 and 30 per cent. annually. And in every department of industry and traffic new energies and hopes are inspired by the people of St. Louis, as they go forward in their mission of greatness ordained by the Supreme Ruler above. But assuming the present population of St. Louis to be 393,500, within the old corporate limits, it is not unreasonable to claim that the extended limits, by the last legislature, will give to her, in addition, 30,000 inhabitants; this added to the number within the old limits, would make 423,500 as the present population of St. Louis, which may be stated, without extravagance, in round numbers at 425,000, which is even below the actual fact, when we consider, that more than two years have elapsed since the United States census was taken.

These facts taken together, I lay it down as true, that the present population of St. Louis, is not less than 425,000. And I am sure that a well taken census, would demonstrate the actual population to be greater, rather than fall below this number assumed.

According to the census of 1870, the population of St. Louis as to nativity was as follows:

TABLE showing the Census of the City of St. Louis according to Nationalities and Color.

BORN IN UNITED STATES.				BORN IN FOREIGN COUNTRIES.				
STATES.	White.	Colored.	Indians.	COUNTRIES.	White.	Colored.	Indians.	Chinese.
Alabama.....	426	559		Africa.....	7	8		
Arkansas.....	246	274		Asia.....	27	1		
California.....	123	1	1	Atlantic Island.....	3			
Connecticut.....	628	6		Australia.....	27			
Delaware.....	231	11		Austria.....	751			
Florida.....	56	28		Belgium.....	254			
Georgia.....	340	205		Bohemia.....	2,652			
Illinois.....	6,729	174	7	British America:				
Indiana.....	2,439	32		Canada.....	1,841	16	6	
Iowa.....	1,424	26		N. Brunswick.....	58			
Kansas.....	274	9		Newfoundland.....	4			
Kentucky.....	3,706	2,010		Nova Scotia.....	74			
Louisiana.....	1,882	611		Brit'h America, not spec-				
Maine.....	712			ified.....	9			
Maryland.....	1,502	171		Total Brit. America.....				
Massachusetts.....	2,542	27		Central America.....	4	1		
Michigan.....	746	66		China.....				
Minnesota.....	145	8	1	Cuba.....	17	1		
Mississippi.....	554	911	2	Denmark.....	178			
Missouri.....	121,931	12,281	9	England.....	5,366			
Nebraska.....	58	1		Europe, not specifi-				
Nevada.....	1	1		ed.....	94	8		
New Hampshire.....	343	3		France.....	2,788			
New Jersey.....	955	8		Germany:				
New York.....	9,250	38		Baden.....	5,881			
North Carolina.....	190	243		Bavaria.....	6,430			
Ohio.....	6,880	362		Brunswick.....	269			
Oregon.....	2			Hamburg.....	310			
Pennsylvania.....	5,878	210	2	Hanover.....	8,858			
Rhode Island.....	150	3		Hessen.....	4,849			
South Carolina.....	150	148		Lubeck.....	9			
Tennessee.....	1,439	1,764		Mecklenburg.....	186			
Texas.....	129	89		Nassau.....	482			
Vermont.....	578	4		Oldenburg.....	220			
Virginia.....	2,235	1,617	1	Prussia.....	21,269			
West Virginia.....	45	9		Saxony.....	1,775			
Wisconsin.....	660	8		Weimar.....	3			
District of Columbia.....	251	30		Wurtemberg.....	2,566			
TERRITORIES.				Germany, not specifi-				
Alaska.....				ed.....	2,933			
Arizona.....				Total Germany.....	59,040			
Colorado.....	20	1		Great Britain, not speci-				
Dakota.....	5	1		fied.....	5			
Idaho.....			1	Greece.....	2			
Indian.....	5			Holland.....	643			
Montana.....	9		4	Hungary.....	126			
New Mexico.....	27	9		Ireland.....	32,239			
Utah.....	18			Italy.....	785			
Washington.....	4			Mexico.....	25	5	2	
Wyoming.....	1			Norway.....	76			
				Pacific Islands.....	1			

BORN IN UNITED STATES.				BORN IN FOREIGN COUNTRIES.				
STATES.	White.	Colored.	Indians.	COUNTRIES.	White.	Colored.	Indians.	Chinese.
At sea under United States flag.....	1			Poland.....	292			
Not stated.....	625	53	2	Portugal.....	14			
Total U. S.....	176,540	22,045	30	Russia.....	86			
				Sandwich Islands.....	1			
				Sardinia.....	1			
				Scotland.....	1,292			
				South America.....	15	2		
				Spain.....	45			
				Sweden.....	237			
				Switzerland.....	2,949			
				Turkey.....	2			
				Wales.....	147			
				West Indies.....	74	1		
				At sea.....	45			
				Not stated.....				
				Total foreign.....	112,197	43	8	1
RECAPITULATION.								
Total Whites.....	288,737							
“ Colored.....	22,088							
“ Indians.....	33							
“ Chinese.....	1							
“ Natives.....		198,615						
“ Foreign.....		112,249						
Grand total.....	310,864	310,864						

By the census of 1860 the total foreign-born population of the country was 96,086. The colored population then consisted of 1,865 free and 4,346 slave the total population of the country being 190,524.

TABLE showing the White and Colored Population of St. Louis County.

ST. LOUIS COUNTY.	White.	Colored.	Indian.	Chinese.	Native.	Foreign.	Total.
Bonhomme.....	5,304	858			4,704	1,458	6,162
Central.....	8,120	803			6,017	2,906	8,923
Carondelet.....	5,000	297			3,609	1,778	5,387
Meramec.....	2,853	583			2,705	731	3,436
St. Ferdinand.....	6,262	952			5,346	1,868	7,214
St. Louis.....	8,395	805	3		5,817	3,386	9,203
St. Louis.....	288,705	22,117	38		188,608	112,256	310,864
First Ward.....	32,099	1,607	2		23,389	10,319	33,708
Second Ward.....	21,295	1,580			12,166	9,689	21,855
Third Ward.....	23,169	754	15		13,341	10,537	23,878
Fourth Ward.....	36,633	2,538	2		26,363	12,810	30,173
Fifth Ward.....	26,257	3,510	7		19,624	10,150	29,774
Sixth Ward.....	20,408	1,104			15,116	6,396	21,512
Seventh Ward.....	16,875	1,630	3		12,603	5,195	18,508
Eighth Ward.....	19,659	7,051			18,600	8,110	26,710
Ninth Ward.....	22,268	649	1	4	13,368	9,574	22,922
Tenth Ward.....	19,430	1,173			12,298	8,325	20,623
Eleventh Ward.....	31,885	687	8		19,018	13,552	32,580
Twelfth Ward.....	18,787	834			12,722	6,899	19,621
	324,729	26,415	41	4	226,806	124,383	351,189

But to continue the discussion, under this head there is a fact worthy of mention, that not only now, but henceforth, will bear materially on the growth of St. Louis. It is the constant tendency of her business men to seek new houses in the country, along the lines of the various railways leading out of the city. Perhaps no city in the Union is so well favored with beautiful surroundings, highly adapted to fine residences.

These surroundings, not only have been, but ever will be, inviting to the rich and refined, who are inclined to seek the quiet of a country residence rather than the bustle and turmoil of the great city. In this way, thousand of people who are really citizens of St. Louis will, from year to year make their homes at a distance and be numbered with other people and thus detract from the number of what may be termed the actual population of St. Louis, on account of their business relations with it.

Already thousands of her business men with their families, live in suburban places, as the facts will demonstrate. Kirkwood, of about 3,000 inhabitants, is made up wholly of heads of families who in some way do business in St. Louis. Webster is the same way. Many live down the Iron Mountain railroad, others at St. Charles, at Alton, at Lebanon, at Belleville, and East St. Louis—thus establishing, beyond any question of doubt, St. Louis to be the third city on the American continent, and the imperial city of the great States of the Mississippi Valley.

In the further discussion of this part of the subject, it must be borne in mind that, in the past, St. Louis, in establishing her increase at eight per cent. per annum, had many adverse interests to contend against, which impeded her growth and retarded her progress. She is now for the first time entering upon a new career of growth and prosperity. She is untrammelled. Advantages of every kind surround her with prodigal profuseness. Henceforth her future advancement cannot be gauged or measured by the past, and instead of an annual growth of eight per cent., she will move forward at the rate of at least twelve per cent. for the next decade.

In fact strange as it may seem, St. Louis has not yet begun to grow, I mean to unfledge herself, into the new life of the future. Nor will she, for the next four or five years. She is still, essentially a frontier city. West and South of her and stretching away to the Indian territory, agricultural pursuits are still in their infancy, mechanic arts have not begun to be, education is unorganized and society has assumed no solid form. Railways and mills, foundries and factories, have made but little advance. And until all these agencies of civilized industry and society, are organized and developed, St. Louis cannot expect any solid support, from a vast region of country reaching from the Missouri to the Gulf of California and from the head waters of the Platte to the Gulf of Mexico,—a region of country, the trade of which naturally and legitimately belongs to her. Therefore however sanguine any may be, about the present growth of St. Louis, they must learn that it is only in its infancy, when compared to what it will be in the future, even within, five years. Hence there is a philosophy in it being the great city of the *future*. That is, its future growth will be a constant fulfillment of a continued prophecy. For when, in the years of the future, great national questions, of an industrial, commercial, social and civil character are developed through the growth of St. Louis, they will be succeeded, by the development through her, of great international questions, thus making her history a long line of successive prophetic history, the fulfillment of which is bearily yet in progress.

But let us look at the special growth of the population of St. Louis, and if

possible, determine what is to be her future career. As it is well known that cities have a rapid or slower growth in the long run, varying according to the eras or transitions through which nations must inevitably pass, thereby rendering it impossible to fix a uniform standard of growth, I shall assume the following figures to be as near the range of a reasonable possibility, or at least for a few succeeding decades, as the best judgment could dictate in advance of the facts which time and other generations will demonstrate.

Starting with the present population, as given by the United States census, we submit the following figures as showing the probable prospective growth of St. Louis:

Population of St. Louis in 1870, per United States census.....	312,963
Population increased at the rate of 10 per cent. per annum to 1880.....	811,742
“ “ “ “ 9 “ “ “ “ 1890.....	1,917,571
“ “ “ “ 6 “ “ “ “ 1900.....	3,464,079
“ “ “ “ 4 “ “ “ “ 1910.....	5,083,297
“ “ “ “ 3 “ “ “ “ 1920.....	6,831,502
“ “ “ “ 3 “ “ “ “ 1930.....	9,180,967
“ “ “ “ 2 “ “ “ “ 1940.....	11,192,633
“ “ “ “ 2 “ “ “ “ 1950.....	13,643,757
“ “ “ “ 1 “ “ “ “ 1960.....	15,071,194
“ “ “ “ 1 “ “ “ “ 1970.....	16,647,941

Notwithstanding the apparent correctness of the percentage of growth given above, it is not probable that either St. Louis or any other city of this earth, will ever grow to such an enormous size as to contain at any time a population so numerous. I therefore submit the figures, and leave them for others to analyze and criticise. I, however, with confidence, predict that St. Louis, in 1880, will not contain less than 800,000 inhabitants, and from 100,000 to 200,000 more than Chicago. Thus fixing her, at that time, the second city on the continent, and, in 1890, the first; and in less than one hundred years, the solution of our problem—the great city of the world. There are those, no doubt, who will regard the prediction for 1880 as reaching beyond the bounds of possibility; but not so. Let those object who are over-cautious and ignorant of the under-life developments of our continental country, or envious of the prosperity of a rival city. There is no monopoly in progress, none in industry, none in intellect; they are gifts alike to all who, under the rule of God, toil in righteousness. Civilization in the nineteenth century is not walled in. It is the free heritage of the great family of man, individual, national and continental. Nations and States are born under its peaceful supervision as new heralds of man's rising and progressive life; and great cities, like stars that begem the skies, will adorn our republic, under its higher administration, and be as fine jewels set in the crown of the imperial nation of the earth.

Whatever may be the change, that civilization will undergo in the future, it may with safety be assumed that for the next thousand years, or nearly so, the cities of the world will grow to be much larger than they have in the past, and that St. Louis will reach a population ranging from 5,000,000 to 10,000,000, within the next one hundred and fifty years. In less than fifty years London will, no doubt, cease to grow in population, and quite likely Paris. Civilization in the Old World will soon begin to re-cast itself, and Rome will yet, under a new government and a more advanced civilization, become the imperial city of the trans-Atlantic Continent. In less than one hundred years

New York will cease to grow, and, adjusted to a new order of the world's commerce and civilization, the struggle for the future great city of the world will be between competitors many of which are not now in the race. In less than one hundred years, St. Louis will move forward, in the advance, in the majestic march of the cities of the world, to her predestined goal of victor in the great race.

What new agencies the arts and sciences may yet call into existence that will have an important bearing upon the distribution or concentration of the people, is difficult to tell. We may reasonably expect that in less than fifty years both the storms and the rains will be controlled by science, and the people can call the winds and the rain at their pleasure; that transportation by means of pneumatic tubes, as well as aerial navigation, will be introduced into practical use, which, together with cheaper freights and more rapid travel on railroads, will exert a powerful influence upon the future interests and civilization of the world's people. How far such contributions by science and art will tend to more readily satisfying the business interests and wants of the people, so as to tend to a dispersion rather than a concentration, must be left for actual experience to demonstrate. We may assume, however, that neither science nor art can very soon contribute anything that will prevent capital and monopoly from concentrating people as well as public interests.

The marvelous growth of cities is seen by the following table, taken from the New York *Tribune*:

"Thirty-eight years ago, there were thirteen European cities having larger populations than New York; now there are only three, and these have been capitals for centuries. The table which follows gives the population of the fifteen largest European cities in 1832 and 1869, and their respective rate of increase. In comparing New York we quote the censuses of 1830 and 1870:

	1832.	1869.	Increase. per cent
London.....	1,624,000	3,214,000	98
Constantinople.....	1,000,000	1,500,000	50
Paris.....	890,000	1,950,000	118
New York.....	197,092	924,313	368
St. Petersburg.....	480,000	667,000	37
Naples.....	358,000	600,000	67
Vienna.....	310,000	640,000	107
Dublin.....	200,000	362,000	21
Moscow.....	280,000	420,000	50
Berlin.....	250,000	800,000	220
Lisbon.....	240,000	340,000	44
Manchester.....	238,000	350,000	49
Amsterdam.....	230,000	250,000	12
Glasgow.....	202,000	401,000	99
Liverpool.....	180,000	520,000	174
Madrid.....	180,000	390,000	105

It is evident from the above figures that modern civilization, on account of its greater protection of human life, enables a more rapid growth to the cities of our own time than was experienced by the cities of the ancients. In fact, monopoly has always been a rule of the human race; and whatever improvement or art that contributed to man's welfare, also contributed to his monopolizing tendencies, and therefore to the more rapid and numerous building up of great cities. It remains for time alone to change this rule of monopoly, if it is to be changed at all, and man be dispersed to rural life. But I apprehend

no such change. The greater multiplication and congregation of the human race into societies communities and cities, is caused by the general advancement of civilization, and the growth and refinement of the social nature of men and women, and that growth must be constantly for the better, therefore as the growth of the social nature tends to multiply and condense, so will the greater cities move forward with increased momentum.

As for me, give me the great city, where man's master-works are reared—where great men and women attract, and are attracted.

“Let poets sing of rural felicity, of flowing brooks and singing birds, and so forth; but give us the surging of the city's life, the unspeakable rapture of being surrounded by the heart-beats of humanity. We love mankind more than birds or brooks. The prattle of the school-yard is sweeter to us than a forest full of orioles, and the refined face of woman a fairer sight to look upon than all the rocks that ever scowled from mountain fastnesses. The solitude of being among woods, and looking forever on the stars and listening to brooks and birds, would drive one mad; but the very thought of being surrounded by one's kind, and listening to the melody flowing up from the great heart of the city, makes our garret a palace.”

The great cities of the world will continue to grow in the future for five hundred or a thousand years, until civilization and republicanism shall have exhausted themselves in a final culmination of individualism, or stealing, by the human race, and the inauguration of a new and truer government and society—a society and government of unity and universality, which, in the very nature of their organizations, will tend to diffusion, and be adverse to monopoly, and consequently adverse to the building of great cities.

St. Louis will, in her future growth, be supported largely by her suburban towns, which will stand as jewels in the crown of the great city. They are now to be seen in embryo, standing around her on every side.

On the east side of the river, and lying within a circle of twenty miles diameter, with St. Louis for its center, are the following towns, with their present population:

Towns.	Population.	Towns.	Population.
East St. Louis.....	5,648	Shiloh.....	250
Venice.....	2,000	Mascoutah.....	2,800
Alton.....	10,000	Freeburg.....	1,000
Belleville.....	10,000	Waterloo.....	2,000
Edwardsville.....	3,000	Columbia.....	1,500
Monticello.....	1,000	St. Jacobs.....	500
Marinetown.....	800	Mitchell.....	103
Lebanon.....	3,000	Centreville.....	2,200
Troy.....	1,500	Prairie du Pont.....	50
Collinsville.....	1,500	Cahokia.....	1,500
Greenwood.....	600	Pittsburg.....	500
Caseyville.....	250	Henrysville.....	50
O'Fallon.....	675	Smithton.....	350
Total suburban population on east side of the river.....		59,772	

The suburban towns and their population, on the west side of the river, and within a circle of twenty miles, are as follows:

Towns.	Population.	Towns.	Population.
St. Charles.....	7,000	Baldwin.....	300
Rock Springs.....	1,000	Eureka.....	300
Elleardville.....	3,000	Allenton.....	200
Lowell.....	1,000	Florissant.....	1,500
Kirkwood.....	2,500	Georgetown.....	60
Webster.....	2,000	Linton.....	75
Bridgton.....	700	Glencoe.....	50
Manchester.....	500	Black Jack.....	400
Baden.....	1,500		
Total population.....			22,485

Add the population of these suburban towns to the number of those who live in the country, and then add the whole number to our city population, and we have well-nigh 600,000 people within a circle of forty miles in diameter and having St. Louis for its center; and it will not require many years to pass away, before 600,000 people will do business within the corporate limits of St. Louis, and yet reside, with their families, at a distance from the city. Trains will soon run upon our railroads at the distance of sixty miles an hour, and at very greatly reduced rates. This will afford advantages and opportunity for cheaper living in the country, as well as better living to many. As we may safely assume that when St. Louis reaches a population of 5,000,000 to 10,000,000, that, in unity with the growth of her suburban towns, she will occupy, in many directions, the country reaching to the circumference of the circle, or twenty miles distant, and in the future, it will not be uncommon to find streets of the finest character fifteen and twenty miles long, well paved and lighted with gas, streets more splendid than those once so beautiful and wonderful in Cordova.

Looking, then, through the veil that obscures the future, and beholding the marvelous growth of St. Louis, more real than fiction can paint to-day, may we not anxiously inquire with the poet.

“Who'll throng these streets, in eager haste,
One hundred years from now?”

The story will one day be told, the riddle of life will be solved with us that now live, and other people will live and love in this city, as we of to-day do, and build wiser than we know.

THE RAILWAY SYSTEM OF ST. LOUIS.

To determine the character and importance of a city or state, the natural advantages and improvements which each possesses must be considered and understood, both in their character and in their immediate and approximate relations. To ascertain the future greatness and controlling power of a city or state, the local and general relations of each to the natural advantages they possess and the possible improvements with which they are likely to be favored, must be considered in the light of their importance to facilitate the civil and industrial pursuits of man. Fully comprehending and understanding the character and importance of these things, as means and agents, to facilitate the civilization of man, we can easily calculate the future growth of cities and states in their onward career to greatness and power.

It is by these means that I propose to determine the commercial importance of St. Louis, and the place she is destined to fill, and the influence she is destined to exercise, in the present continental strife for commercial supremacy.

The most important consideration of the subject is her system of railroads and navigable rivers, a full description of which we submit, in so far as the facts relate to the practicable purposes of commerce.

But before we give the facts of these two great branches of commercial and material thoroughfares, we subjoin a brief historical statement of

THE ORIGIN OF RAILROADS IN MISSOURI.

The very first step in the building of railroads in this State, was taken in the month of February, 1836, when the then Mayor of the City of St. Louis [John F. Darby,] made an official communication to the Board of Aldermen, urging the measure in the strongest terms, and that immediate steps be taken to effect that object. On that communication, the following proceedings were had.

“In the Board of Aldermen of the
City of St. Louis, February 25th, 1836,

“On motion of Mr. Grimsley, it was

“*Resolved*, That the Mayor's communication of this day on the subject of a county meeting be referred to a select committee, with instructions to draft an address to the people of St. Louis county setting forth the great advantages which must inevitably flow to our city, county and state from a speedy survey and location of the proposed railroad from this city to Fayette in Howard county; and inviting the citizens to attend a meeting to be held in the Court House on Thursday, the 3d of March, to appoint delegates to a convention to be held by delegates from all the counties through which said road may pass from this city Fayette aforesaid.

"ON MOTION OF MR. O'NEIL, IT WAS

"Resolved, That in the event of the convention for taking into consideration the propriety of making an application to the next General Assembly of Missouri for a charter for a Railroad from St. Louis to Fayette, meeting in St. Louis, the Mayor is authorized respectfully to invite the members of said convention to take lodgings at such house or houses as they may think proper at the cost of the city, and to furnish the City Hall for the use of the Convention."

An address was accordingly made to the people of the county of St. Louis, and a meeting called at the Court House in the City of St. Louis, on the 3d day of March, 1836, for the purpose of taking action to promote the building of railroads. The meeting was organized by the appointment of Doctor Samuel Merry, as chairman, and Charles Keemle, secretary.

The chairman appointed a committee, consisting of John F. Darby, Doctor William Carr Lane, Thornton Grimsley and Archibald Gamble—a committee, to make a report, and draft an address to the people of the State, on the subject of Railroads, and adjourned to the 5th day of March. When the meeting assembled, John F. Darby, chairman of the committee, made the following

REPORT.

When we look abroad, we see the people of every State in the Union, both in their individual and corporate capacities, actively engaged in facilitating the social and commercial intercourse between the distant parts of their respective States by means of railroads and canals. Whilst here at home we see nothing done upon these all important objects, and little essayed until very lately.

In fact we are forced to admit the unwelcome truth, that, on this matter, we are behind the spirit of the age. Our neighbor, Illinois, has gallantly taken the lead of us and set us on example much more worthy of imitation than of jealousy. She is pursuing the interest of her own people according to her best judgment, by intersecting the State in many directions, by channels of communication. Let us take admonition from her course, and commence action upon the same policy for the benefit of every part of our own State. Fortunately the citizens of our own State are awakening to a just sense of their actual position and true interests; and we, a portion of the people of the city and county of St. Louis, most cheerfully meet our brethern from every part of the world, and pledge ourselves to aid to the utmost extent of our power every object of internal improvement which is intended for the common benefit of the whole State.

In sketching the outline of any great scheme of internal improvement, the integrity of the interests of the whole State should be kept constantly in view, and those lines of inter-communication which would most effectually connect the distant parts of the State, and harmonize their interests, should in our opinion receive most favor from an enlightened public.

This assembly disclaims any near-sighted view of state policy which would assume that one section of the State could be benefited without benefiting the whole State; or that one section could be injured, without injury to the

whole. And in prosecuting any such great scheme of improvement, it is obviously proper to proceed upon principles of unquestioned soundness and of universal application; namely that the good of the greatest number of people, and the greatest mass of interest, should be first consulted, in accordance with the application of this principle.

We consider the project for a railroad from the western to the eastern part of the State, which is proposed to be made, as that object which ought to take precedence of all others, and as being altogether worthy of the best exertions to ensure its success.

When we contemplate the completion of this grand project, with all its beneficial consequences in a social, agricultural, manufacturing and commercial point of view, a project which will approximate the east, west, and middle counties—which will break down sectional animosities, having their origin and nature in mutual ignorance of each other—which will increase the value of agricultural products, encourage manufactures, extend commerce and aid in the development of unexplored resources:—we repeat, that the contemplation of this project necessarily associates other similar projects as accessory to the main design, and enlists for all such undertakings, in advance, our best wishes. But as this meeting is assembled for the sole purpose of co-operating with others, in making the road from Fayette to this place, to that object alone its action should be confined; projects for the extension of the road to the western boundary of the State, and the necessary lateral branches, to the consideration of the delegates from the several counties; or to future time and enterprise.

Upon this occasion many reasons present themselves to us which will no doubt influence the co-operation of individuals and corporations in this magnificent work. Patriotic considerations will influence some individuals and pecuniary interest will govern others.

The counties through which the road will pass possibly may follow the example of Howard county and give some aid; the State itself in providing for the general welfare may reasonably be expected to put its shoulder to the wheel; and the government of the United States, without doubt, will assist in a work which will so greatly enhance the public lands, and of the same time facilitate the defense of the frontier. But as this is not perhaps the most suitable occasion which may offer for a detail of the reasons upon which these calculations are based, we forbear to enlarge on the subject.

Be it therefore

Resolved, That a committee of delegates, consisting of sixteen persons, be appointed by this meeting in behalf of the county of St. Louis, whose duty it shall be to meet the delegates from other counties, appointed upon the basis of representation at such place as may be most agreeable to our Western brethren, upon the 20th of April next, or upon any other day which they may name, and that it shall be the duty of our delegates to aid in the adoption of such measures, as may serve most effectually to ensure the making of a railroad from this city to Fayette in Howard county.

2d. *Resolved*, That the different counties throughout the State be invited to hold county meetings and send delegates to the proposed convention.

JOHN F. DARBY, chairman.

Which report and resolutions were unanimously adopted.

H. R. Gamble, Esq., addressed the meeting at some length on the subject, in a spirited, chaste and highly patriotic strain of language, and concluded by submitting the names of the following gentlemen as delegates to the proposed convention who were unanimously chosen.

Edward Tracy, J. B. Brant, John O'Fallon, Samuel Merry, Archibald Gamble, General William Clark, Joseph C. Lavalley, Thornton Grimsley, Daniel D. Page, Henry Walton, Lewellin Brown, Henry Von Phul, Adam L. Mills, Pierre Chouteau, Jun., and John Kerr.

Doctor William Carr Lane submitted the following resolution, which was unanimously adopted :

Resolved, That the thanks of this meeting are due to the Mayor and Aldermen of St. Louis for the tender of the hospitalities of the city to the delegates from the several counties to the proposed meeting ; and that a committee of seven persons be appointed by the chair, in behalf of this meeting, to aid the committee of the municipal authorities in providing for the accommodation and comfort of the delegates during their sojourn in this city."

We have reported the whole of the proceedings, because it was the very beginning of that great system of railroads, which has since added so much to the greatness and glory of this growing and increasing city. The liberal sentiments, enlarged and statesman-like views, set forth in the report and address to the people, are such as to command respect ; and should be recorded as emanating from the then worthy representative men of this great city ; nearly all of whom have passed off the stage of action, but the rich rewards of their good deeds survives them and are now being enjoyed by the inhabitants of this prosperous city.

A convention of delegates, in pursuance of these proceedings, from eleven of the most populous and wealthy counties in the State, met in the city of St. Louis, on the 20th of April, 1836. The members of the convention were all entertained at the expense of the city. The municipal authorities and the great majority of the people of the city joined with enthusiasm in furthering the object of the noble undertaking. The city government greeted and welcomed them in the following terms :

Mayor's Office, Saint Louis,
April 20th, 1836.

Mr. President and Gentlemen of the Convention :

The municipal authorities of the city of St. Louis have the honor to tender to you the hospitalities of the city, and upon the Mayor has devolved the pleasing duty of announcing to you, that they have been no less honored than gratified that their fellow-citizens in the various counties which you represent in this convention should have selected this city as the place of your deliberations upon a subject of such vital importance to the interest and prosperity of the State. A committee has been appointed, on the part of the Board of Aldermen, to make provision for the comfort and convenience of the delegates

to this convention; and to provide such other accommodations as may facilitate the objects for which you have convened. Be pleased, gentlemen, to accept the best wishes of the Mayor, Aldermen and citizens of the city of St. Louis, for the successful completion of the improvement you have assembled to consult about, and the fullest assurance of support, so far as the corporate authorities of this city can aid in the furtherance of an enterprise alike so desirable to the people of the county and the inhabitants of this city.

I have the honor to be, gentlemen,

With great respect,

JOHN F. DARBY, Mayor

of St. Louis.

The convention projected two railroads, one to the Iron Mountain; and the other, by way of St. Charles, and up through the counties bordering on the Missouri. After which they celebrated their undertaking in a grand banquet, given at the then National Hotel, corner of Third and Market streets. The Mayor of City, Mr. Darby, presided.

In pursuance of these proceedings, George K. McGunnigle, as a member of the House of Representatives from St. Louis county, at the session of the Legislature in the winter of the year 1836-7, introduced and passed the bill for the charter of the St. Louis and Iron Mountain Railroad, bring the first railroad bill that was ever passed in the State. The State refused to aid the measure, and the money could not be then raised to build the road.

The same men, who had first projected these railroads, still continued their exertions. In the winter of 1838-9, Mr. Darby, being then a member of the Legislature, made an elaborate report and advocated a bill for the building of the railroads, which had been recommended by the Convention.

Since the days of those conflicting political opinions, on questions of internal improvement, those earlier and frontier times, there has been a steady growth of the railway system of St. Louis, and now she numbers more roads than any city on the continent, as will be seen by the lines given below, as they are now completed; also those which are being built, and the most important of such lines as have been agitated:

1. The St. Louis and Cairo R. R.
 2. Belleville and Southern R. R.
 3. St. Louis and Evansville R. R.
 4. St. Louis and Southeastern Illinois R. R.
 5. New Albany and St. Louis R. R. Building.
 6. The Ohio and Mississippi R. R.
 7. The St. Louis, Vandalia and Terre Haute R. R.
 8. The Indianapolis and St. Louis R. R.
 9. Decatur and East St. Louis R. R.
 10. Chicago, Alton and St. Louis R. R.
 11. St. Louis, Jacksonville and Bloomington R. R.
 12. Rockford, Rock Island and St. Louis R. R.
- Peoria, Pekin and Jacksonville R. R.; a connection.

13. Quincy and St. Louis R. R. Crossing the Mississippi river, north of St. Louis, the first road we meet is
14. The St. Louis and Keokuk R. R. Building.
15. The North Missouri R. R. North Branch.
16. The North Missouri R. R. West Branch.
17. The North Missouri and St. Joseph R. R., *via* Hannibal and St. Jo. R. R.
18. St. Louis, Chillicothe and Omaha R. R. Building.
19. Missouri Pacific R. R.
Sedalia and Lexington Branch of Mo. Pacific.
Sedalia and Ft. Scott Branch of Mo. Pacific.
20. St. Louis and Ft. Scott Air Line R. R. Prospective.
21. Southwest Pacific R. R.
22. Iron Mountain R. R. to Galveston and Mexico.
23. St. Louis and Springfield, Illinois. Building.
24. Illinois Central R. R. Running through trains between Chicago and St. Louis and St. Louis and Dubuque, using the Vandalia line to come into St. Louis.
25. Illinois and St. Louis.
26. East St. Louis and Carondelet.
27. St. Louis County R. R. (Narrow Gauge.) Building.
28. Detroit, Shelbyville St. Louis. Building.

Thus we have twenty-eight distinct roads converging at St. Louis, nearly every one of which is built, or under way of construction, and not one will be abandoned. Of this number only two are specially local. No other city on the continent or in the world has so many, nor is it likely that any rival place will ever be favored with so great a number. I have neglected to place on the list several local and connecting roads which properly belong to the St. Louis system, and which are valuable feeders to other lines, but as they are not essentially trunk lines, were omitted. My object has been more especially to show that St. Louis stands in the center of a great system of railways, which radiate from her as a focal point to almost every extremity of the country, touching oceans, lakes, and seas, and uniting the civil, social and commercial interests of a continental people, as well as creating an easy exchange for the fish, fruits, and other products of antagonistic climates.

The following statement of distances will show how St. Louis stands in relation to some of the principal cities of the country, as well as to our seaboard markets.

Places.	Distance.	Places.	Distance.
	Miles.		Miles.
From St. Louis to—		From St. Louis to—	
Boston, via rail.....	1200	New Orleans, via rail.....	722
New York.....	1042	Galveston.....	787
Philadelphia.....	974	San Francisco.....	2353
Baltimore.....	929	Denver City.....	912
Washington City.....	951	Omaha.....	456
Richmond.....	1069	Leavenworth.....	296
Norfolk.....	1176	Chicago.....	280
Charleston.....	970	Cincinnati.....	340
Savannah.....	960	Louisville.....	302
Mobile.....	666	Indianapolis.....	258
Kansas City.....	272	Cairo.....	153
Buffalo.....	704	Detroit.....	504
Milwaukee.....	365	Pittsburgh.....	611

In submitting this statement of the railway system of St. Louis, its mighty frame-work and net-work which ramify the entire Valley of the Mississippi, with Briarean arms extended to each ocean, the gulf and the lakes, and holds in its grasp the empire of the continent; we also submit that in the most superlative degree does St. Louis occupy the center of the greatest productive power, as well as the greatest center of river navigation afforded on the globe; and thus uniting the greatest means with the greatest facilities that the world affords, who, with a just comprehension of the facts, does not see the truth of the argument in favor of the future great city, so conclusively as to be convicted of its correctness, generations in advance of the actual achievement of such a goal? But this vast contribution of productive power, this system of river navigation, as well as the ever-expanding railway system, has a primary meaning. Each foreshadows generations of civil, industrial and commercial progress in the years of the future.

RAILWAY POLICY FOR ST. LOUIS.

A consideration of this subject leads us to consider a railway policy for St. Louis as well as for the entire West. This new policy means nothing more nor less than a Western railway policy, and with its adoption will also be organized a political and commercial policy for the West. It is no longer the fact that the great States of the Mississippi Valley are commercial or political dependencies of the cities of the Atlantic seaboard. It is true they have political and commercial interest with those cities and States, and it is to be hoped ever will have. But the time is now and will continue henceforth, long as the waters run, that the commercial and political importance of the Valley States are greater than those of either seaboard, and therefore they must be the dictators of such political and commercial policies as their wisdom and welfare may demand. The political power and commerce of the American people have spanned the continent, and from the Pacific shore civilization re-acts to the center, where, like a great maelstrom, sweeping from the circumference inwardly, will organize the greatest power and activity of our people in their future growth and struggle for gain.

It therefore becomes the people of St. Louis, as well as of the West, to establish a railway policy that will best subserve their commercial interest—a policy that will create an exchange of Western products North and South, instead of allowing them to be carried away in less valuable channels, East

and West. Nature has already dictated that the commerce of this great valley must follow the flow of the waters to the gulf, and from thence seek the markets of the world; and those of the western people who do not already comprehend this truth, will soon learn it through the impoverished railway policy that is rapidly binding them to the East, as the Philistines bound Samson.

St. Louis must make a bold stand for a railway policy that will cause the exchange of the products of the Valley States North and South—an exchange between the lakes and the gulf—between different climates, and not along lines of the same latitude. St. Louis wants the trade of the tropics and the trade of the North. She must have a railway policy that will control, this trade, and make her the point of exchange between the two climates.

By the new railway line now projected, *via* Iron Mountain, Fulton and Galveston Railroads, which is under way of construction, the gulf can be reached at a distance of 787 miles. When this road is completed, it will be of vastly more value to St. Louis than any other road of her system, and its completion will open the way for that policy, for North and South exchange, which must be established in the interest of the trade of the Valley States.

In the interest of the especial climatic trade and postal service of the people between the lakes and the gulf, it is highly probable that a project will, in the course of ten years, be set on foot to construct a pneumatic tube from Chicago, *via* St. Louis, to New Orleans. The postal patronage, together with the fish and fruit trade, would well-nigh, if not wholly, repay for its construction.

THE RIVER SYSTEM OF ST. LOUIS.

Auxiliary to the Railway System of St. Louis, is her incomparable system of river navigation. No continent possesses so great a connected system as that belonging to the great valley of North America. It has more than 13,000 miles of available river navigation, and no formidable obstacles to prevent its artificial expansion.

The following tabular statement prepared by Humphrey and Abbot, in their great work, on the survey of the Mississippi river and its tributaries, presents some very important facts connected with the larger streams of the Great River Systems of the interior basin of North America.

RIVERS.	Distance from Mouth.	Height above Sea.	Width at Mouth.	Downfall of rain.	Means discharge per sec.	Area of Basin.
	Miles.	Feet.	Feet.	Inches.	Cub. feet.	Sq. miles.
Upper Mississippi.....	1,330	1,680	5,000	35.2	105,000	169,000
Missouri.....	2,908	6,800	3,000	20.9	121,000	518,000
Ohio.....	1,255	1,649	3,000	41.5	158,000	214,000
Arkansas.....	1,514	10,000	1,500	29.3	63,000	189,000
Red River.....	1,200	2,450	800	39.0	57,000	97,000
Yazoo.....	500	210	850	46.3	43,000	13,850
St. Francis.....	380	1,150	700	41.1	31,000	10,500
Lower Mississippi.....	1,286	416	2,470	39.4	675,000	1,244,000

While it is true that the rivers given in the above list do not include one-half, and but little more than one-fourth, of the navigable rivers of the Mississippi Valley, they are the main branches that form the distinct drainage system that collect the water of the great valley and send it forth to the Gulf.

But whether we enumerate them as eight or thirty, makes no difference in the discussion, for St. Louis is alike central in either case, to the great river system, of the Grand Valley of the Mississippi. And were there not a railway on the continent, she would command the commerce of every State between the Alleghany and Sierra Nevada Mountains, for she is connected by navigable water, with every part of the great valley. And steamers constantly ply to and from her wharf, up and down the streams; ramifying every section of the country to bear away the rich products of the farm, the shop and the mine. The importance of the river to St. Louis may be inferred from the statistics given below.

ARRIVALS AND DEPARTURES AT THE PORT OF ST. LOUIS
FOR 1871.

ARRIVALS.*

1871.	Upper Mississippi.	Lower Mississippi.	Illinois.	Missouri.	Ohio.	Osage.	Red and Ouchita.	Arkansas.	White.	Cumb. and Tenn.	Barges.	Total.	Tons Freight.
January.....	1	22	..	..	5	..	3	1	..	..	10	42	6,846
February.....	24	20	..	4	19	..	5	5	..	..	52	199	45,873
March.....	23	96	51	14	44	1	5	6	..	32	154	457	146,245
April.....	22	33	44	23	38	..	4	4	..	..	99	387	124,515
May.....	109	34	42	27	38	..	5	6	..	12	254	583	158,447
June.....	102	26	29	24	18	..	4	5	..	..	4	76	94,318
July.....	98	21	23	50	7	..	2	4	..	4	95	354	78,080
August.....	114	23	20	47	4	..	4	3	1	..	93	372	69,012
September.....	90	23	19	36	4	..	4	4	..	1	126	369	51,850
October.....	98	22	14	15	..	..	2	1	1	..	168	387	52,900
November.....	74	96	12	9	1	..	1	..	1	..	38	234	55,260
December.....	1	..	..	..	1	..	..	..	..	..	..	9	1,055
Total.....	882	889	268	249	179	3	39	41	3	21	1,165	3,739	884,401

DEPARTURES.

1871.	Upper Mississippi.	Lower Mississippi.	Illinois.	Missouri.	Ohio.	Osage.	Red and Ouchita.	Arkansas.	White.	Cumb. and Tenn.	Total.	Tons Freight.
January.....	12	25	..	..	6	..	3	2	1	..	39	18,048
February.....	26	73	14	..	5	17	..	5	4	..	146	59,577
March.....	97	87	48	21	37	1	6	6	1	3	307	104,641
April.....	99	80	43	33	32	1	5	5	..	3	301	103,928
May.....	103	95	49	24	36	..	4	4	..	4	319	112,790
June.....	100	80	28	31	20	..	4	4	..	2	269	85,886
July.....	101	75	23	47	4	..	6	5	..	5	266	75,120
August.....	117	85	17	43	3	..	4	4	..	2	275	63,101
September.....	91	96	19	30	1	..	3	3	..	1	244	50,037
October.....	91	101	13	12	..	..	..	1	1	..	219	41,481
November.....	68	96	11	6	3	..	10	4	..	1	199	51,708
December.....	..	16	..	..	..	..	2	1	1	..	20	6,181
Total.....	895	910	265	252	159	2	52	43	4	23	2,604	770,498

ARRIVALS AND DEPARTURES FOR SIX YEARS.

ARRIVALS.				DEPARTURES.		
YEAR.	Boats.	Barges.	TONS.	YEAR.	Boats.	TONS.
1871.....	2,574	1,165	883,401	1871.....	2,604	770,498
1870.....	2,796	1,195	1,166,889	1870.....	2,782	.....
1869.....	2,789	1,240	1,225,443	1869.....	2,786	.....
1868.....	2,338	1,133	1,055,705	1868.....	2,579	.....
1867.....	2,478	947	1,086,320	1867.....	2,588	.....
1866.....	2,972	1,142	1,227,078	1866.....	3,096	.....
1865.....	2,768	1,141	1,229,826	1865.....	2,963	.....

MERCHANTS AND COMMERCE OF ST. LOUIS.

THE MERCHANTS.

If the boy is father to the man, with equal propriety may the village be said to be the progenitor of the metropolitan city. The same energy of character in both, the same elements of organization, are developed as prophecies of future eminence. These may not be apparent at the beginning, because the grand characteristics which are to distinguish either may not have found their appropriate field of appreciation and action in the mind of the people; the embryo, however, existed, and when greatness was achieved its parentage is traceable with all possible certainty. When Laclède selected the site now occupied by the Future Great City of the continent, it was because the locality was conducive to the leading design—the successful operations of the business of the early founders, the fur trade. Above and below it the rivers of the North, West and East, debouched into the main stream of the Mississippi, on all of which was found the wealth they sought, and opened a field of hardy and remunerative enterprise sufficiently broad to attract the attention of the boldest spirits. The idea was not conceived at that day that the rich soil penetrated by these rivers would teem, in half a century, with the richest products of agriculture, and that these inland waters would eventually bear upon their bosom a commerce of greater value and of more beneficial influences to humanity than the world had hitherto known; yet that pre-eminent object was then inaugurated by a determinate power which shapes destinies and appropriates resources. The pirogue of the trapper was the pioneer of the steamer, and his indomitable will and courage the intuitive forces destined to subdue the wilderness and open up this magnificent domain to civilization and the beauties and comforts of progressive art. Looking forward at that time, not one of those early voyageurs or projectors, however intuitive, could discover the first intimation of the ultimate result of his labors; looking back, there is not an individual but can read plainly and legibly the connection existing between the design and the consummation, the commencement and the realization. The village founded by trappers has grown into a city erected by merchants and artisans; the broad expanse of plain, varied by valley and hill, has yielded to the plowshare and exchanged its savage aspect for the economic glories of harvest fields and happy homes.

At the time, however, when the Mississippi Valley attracted the attention of Spanish and French adventurers, and subsequently of American citizens—for three nationalities have claimed the magnificent country—the growth of cities was the work of centuries emigration was on a small scale, transporta-

tion was of the most primitive order, science had developed little of mechanical skill and power to overcome distances and impediments. The ocean had not been crossed by steamships, while river navigation depended entirely on simple muscle. In the energy and brightness of the boy the future man might be discerned, because individual achievements had their precedents thickly scattered throughout the history of the race, while the formation of communities had resulted from the aggregations of ages rather than from the advantages of location or the wealth of soil and mineral resources. In a thousand years, therefore, the daring flight of a poetic fancy might reckon on the march of Empire towards the West and class it as the last act in the world's drama; but that in a century such a scene should be presented was beyond the human intellect to conjecture or entertain. It may be doubted if Laclede ever dreamed of a commerce beyond the commodities of furs and skins, of a settlement greater than that which offers protection by rude stockades against a savage enemy, and comforts superior to the most limited demands of humanity. The elements on every hand of progress and greatness, as we see and appropriate them, were so many obstacles to the development of such a result—a seal on the future of a more opaque and impenetrable character to hide the supposition from the reason or imagination. Rapid streams, dense forests, extended prairies, and the isolation of a vast interior forbade the idea of civilized industries and the concentrated influences of settlements to resist the treachery and combined power of the murderous Indian. His policy was to preserve the hunting-grounds in their primeval wildness, for which these grand provisions of nature seemed peculiarly adapted. Indeed, we need not go back to that time and to the trapper's village to gather up the notions of the geologists, the statesmen and the merchants of that period, as they cogitated along the banks of the Mississippi or polled and cordelled upon the Missouri and Illinois; for not longer ago than yesterday the enlightened men of the present supposed the broad belt of land between our State line and the Rocky Mountains to be a desert, incapable of cultivation, and closed out by drought and inhospitable barrenness from the inroads of civilization. On our western border, however, the work of settlement goes on with continuous improvement, from year to year, until for a thousand miles beyond the Missouri line the Great American Desert is dotted with thriving villages, and even cities, and begins to blossom like the rose. The remotest rain-line is already passed, and the successful experiment of cultivation even without irrigation has already been made and found to be practicable. It is in these constant developments of new resources that we find the strength which steadily builds up, and must continue to enlarge, this metropolitan city.

There were in the nature of the service to be preformed by the early pioneers characteristics of moral power which have had much to do in shaping and directing the destiny of St. Louis. The men who sought this wide and wild theater for their exploits were of no ordinary mould. They were self-reliant and determined. Danger was their constant companion and steadiness of purpose their cardinal virtue. Of all who turned their backs on the safety and comforts of home, of whatever nationality, and set their faces hitherward

to brave the perils and share the labors of a constantly exposed frontier life, each was a well-defined individuality. None other crossed the Mississippi at that day and ventured into the *terra incognita* which lay beyond, guarded as it was by real dangers and by the more terrible apprehensions which spring from exaggerated legends and imaginary horrors. Their dependence was upon themselves; their safety rested alone within the citadel of their own indomitable will and determined action. Individuality of character begets responsibilities in almost all cases of intrinsic worth. A prominent man cannot afford to be indifferent to his obligations, public or private. His promises and pledges must be met promptly, else his standing becomes a mark for peculiar derision and defamation. This ingredient in the character of the early settlers of the Great Valley has exercised ever since a high-toned influence not only in administrative duties which belong to all departments of duty, but in the trade relations which have been established throughout the country. The subject of the boyhood of this community was introduced for the purpose of adverting to these moral agencies, showing that the implantations of independent thought and action, of energy and integrity, early made, have taken deep root and have distinguished, and continue to distinguish, our commercial men to the present time. They began with no fanciful schemes of suddenly acquired fortunes, but adopted the plain and solid basis of hard work and fair equivalents. Wild speculations were not indulged, and it may be doubted if such vagaries found a lodgment in their brain. Buy and pay promptly, was the secret of success, the motto of business. This slow and sure policy seems to have been adopted—too slow, it may be said, and probably was; for even now, with all the evidences of a brilliant future, the brakes are applied to the wheels of progress with singular and provoking obstinacy. Never was development allowed a safer process. No scheme of early aggrandizement was adopted, but the pioneers simply depended upon natural means to acquire competence without resorting to any of those excitements in which speculations finds its main agencies.

Capital was considered the basis of success, and a character was established by our traders which has clung to their successors with remarkably good effects. The boy was father to the man in his patient industry, his indomitable independence, his self-reliance and individuality, and his freedom from experiments of doubtful propriety, in which recklessness forms generally a too large ingredient. Then the material of the community was composed of men of enterprise, who were able to brave dangers, were fond of adventure, and not easily deterred by arduous labors and personal sacrifices. Each prominent individual had the reputation of the settlement to bear, and each was willing to take the responsibility of that reputation, though it involved his pecuniary means or his life. How well these characteristics were exemplified in subsequent times, when St. Louis began to assume the position of a commercial point, is one of the proudest portions of its history. The financial convulsions of the country were felt here with the same violence with which they shook the established centers of business in the East, but they were met by resistances of personal effort and forbearance, of local pride and mag-

nanimity, of determined purpose and self-sacrifice—the offspring of those qualities which had triumphed over physical dangers and overcome the discomforts of the wilderness, which were not found elsewhere. Men stood in the doors of our banking institutions, and by a pledge of their private fortunes subdued the evil spirits of alarm and doubt. They threw themselves in the breach and re-established confidence. The honor of the city rested upon their prompt, decided action, and they were quick to respond. A remarkable instance of this kind occurred in the financial disturbance of 1855, when the entire country was shaken by a crisis that involved both the pecuniary and political interests of the nation. It was a pressure upon our civic institutions which tried beyond precedent at that day the principles of self-government, and tested the powers of popular domination. When other communities went under, hopelessly wrecked by the storm of disaffection and partisan fury, the people of Missouri, directed by calm, decisive leaders, who had won their positions through the practical school of imminent danger and personal adaptations, re-established order and preserved the honor of our commonwealth. Credit and patriotism were boldly asserted, and the victory honorably achieved. Capital began to look to the west bank of the Mississippi for the citadel of integrity, and here that proud distinction has been found, in a score of conflicts that have imperiled commercial credit since, as it had on less memorable occasions imperiled it before. The honors won by the metropolis of the Adriatic were repeated here—the one the refined center of Eastern commerce, the other the rude beginnings of a capital destined to be erected in the wilds of the Western Empire. St. Louis was unknown when

“ Venice sate in state throned on her hundred isles,”

but the same inviolate honor in trade relations which embellishes the history of the old *regime* of business obligations and extended transactions, still works its influence in the successful achievement of metropolitan greatness. Looking through those periods of financial struggles, there are comparatively few of our merchants who took advantage of the stress of circumstances to avoid calamity, benefit their position, or yield to inglorious imbecility or defeat. They met the liabilities of the day with open frankness, and, generally free from the encumbrances of unreasonable liabilities and speculative investments, were able with renewed industry to start afresh in the race of enterprise.

Large business centers have been started since the early trappers settled this site as the rendezvous of their operations, and every inch of ground has been contested for commercial supremacy by them. For a while, aided by outside capital and the appliances of modern influences, the contest has seemed doubtful, and artificial stimulants have threatened to triumph over natural advantages. The very strength of this locality has seemed but to assist in its prostration. Situated between the agricultural interests of the North and South, its trade was the exchange of the commodities of both, and it soon became the battlefield for the extension or contraction of an institution which finally shook the very foundations of the Republic. Its grand position invited the contest, and all the forces of anti-slavery influences were pointed in this direction. National means were employed, corporate powers invoked, individual and combined efforts brought into requisition to crush or render nugatory the in-

herent strength of this business emporium. Our rivers were to be superseded by railroads, and our plain old style of honest dealing laughed out of countenance by a mode of glittering operations which had no basis but that of fancy, and no powers but those of excitement. The conflict broke at last in actual war, and during its prolonged existence, with the guns of both parties directed against us, our trade languished, and those points which presented no strategic advantages were really without the circle of business and political consideration, were vastly benefited. St. Louis must lose the supremacy of her position, even through it requires millions to overcome her natural advantages, was the language and determination of the party who looked upon slavery as a morally abhorred system and political monstrosity. Self-reliant, the descendants of the fur traders had sought no outside influences, and, secure in their position, they awaited the results with calm indifference; still developing her energies by those slow processes which wait upon positive demands her citizens followed the plain requirements of the day. When the army of occupation began to penetrate the far West, and improvements became necessary to retain the business relations established in the East, and South, and North, our people were ready for action and entered upon the duty with proper zeal and activity.

It is one of the characteristics of true merit that it is reliable and distinguished under all circumstances. If slavery was supposed to be peculiarly adapted to the staple articles of agriculture and the mining wealth of the State, it has been found since its abrogation that universal emancipation has far stronger ingredients in its nature to enrich materially her condition, and draw hither hither the wealth of population, of labor and of capital. From that gigantic civil revolution which tore asunder the bands which supported our industries—the foundations on which was erected the superstructure of our local forces—the State has become doubly powerful and prosperous; she has thrown herself at one bound within the influences of a sympathy which prevades an advanced civilization the world over, and gives to this internal region those moral correspondent qualities so necessary to the true development of physical resources. Our population, therefore, mingles in its veins the blood of all nations—blood which possesses the fire of adventure, the stamina of enterprise, the daring necessary to achieve personal independence.

An allusion to an incident in the history of the city may be permitted which illustrates the texture of those moral elements of character derived from the crude looms of the early settlers of the trappers' village. In 1849 St. Louis was visited with the tripple furies of fire, blood and pestilence. The best portion of her business locations were reduced to ashes; five thousand of her people died with a disease that bid defiance to medical skill; her rivers rose and flooded her productive bottom lands. Ruin stalked through her streets and pervaded the country tributary to her commercial support. At this trying moment, with that self-reliant and indomitable will which carried her founders safely through the ordeals to which they were exposed, she met the responsibilities of the trial with an independent spirit, a prowess of resistances and recuperative energies of the highest type. Honorable as it is to our nature that sympathy finds a lodgment not alone in individual bosoms, but in communities and nations, our citizens asked no aid from this benevolent feeling to meet the exigencies of the hour. Not a dollar was asked or received from contiguous or distant cities. The bravery and self-reliant characteristics of the trapper shone out in the artisan, merchant and professional man of the present, and an immediate effort was put in requisition to redeem losses and repair devastations. Such an exhibition of unconquerable will, of inherent strength, is surely a forcible prognostic, a grand prophecy of the ultimate destiny of our beloved metropolis.

THE COMMERCE.

We have glanced in the aggregate at the characteristics of the merchants of St. Louis, which have constantly imparted a vigorous vitality and rapidity to her commercial growth, and it will be appropriate to turn from such a subject to the existing commerce of the city. In the historical review, to be found in preceding pages, a general idea has been given of the rise and progress of the trade of St. Louis, during the earlier years, when the thriving river town but faintly foreshadowed the magnificent metropolis of the future. We have looked upon it in its infancy, and now present some facts and figures which illustrate its extent and character in the present, and indicate the vaster proportions to be attained in the future. In presenting facts and figures respecting the trade, manufactures, etc., of St. Louis, we are necessarily compelled to do so in the most compact form, and to leave to the reader the thoughts and comparisons naturally suggested by the statistical statements made. It is not our purpose to review in detail each branch of business, but to group only the more important, from which the aggregate may be fairly inferred.

To begin the commercial statement of St. Louis, it is but reasonable that it be introduced by a presentation of the organization of the Union Merchants' Exchange, the official body representing the commerce of the city.

The name and organization of the Union Merchants' Exchange grew out of the exigencies and conflicting political opinions of the late civil war. It was organized in 1862, and incorporated in 1863. The character and importance of this organization has grown with the city, and it now numbers about thirteen hundred members. Membership includes all branches of trade; but the principal business transacted "on, change" is the flour, grain, provisions and the products of the farm.

The regular session, is from 11 A. M. to 12 1-2 P. M. Call board from 12 1-2 P. M. to 1 P. M. Telegrams, from the London and Liverpool markets, as well as from all the principal cities in the United States are received "on, change," and posted daily.

As to the character and integrity of the merchants and business men who belong to the Exchange, and there transact business, none in the United States stand better. In fact, the St. Louis merchant, from time immemorial, has been known, all over the country, as a man of honor and integrity. His word and his paper have always received the highest credit at home and abroad; and the merchants of no other city in the country have held a higher rank.

The following list comprises the officers of the Exchange, since its organization, up to 1872, viz:

Officers of the Union Merchants' Exchange, since its Organization.

1862.

President—HENRY J. MOORE.
Vice President—CARLOS S. GREELEY, A. W. FAGIN.
Secretary and Treasurer—CLINTON B. FISK.

1863.

President—GEORGE PARTRIDGE.
Vice Presidents—CARLOS S. GREELEY, A. W. FAGIN.
Secretary and Treasurer—J. H. ALEXANDER.

1864.

President—THOMAS RICHESON.
Vice Presidents—BARTON ABLE, CHARLES L. TUCKER.
Secretary and Treasurer—J. H. ALEXANDER.

1865.

President—BARTON ABLE.
Vice Presidents—E. O. STANARD, H. A. HOMEYER.
Secretary and Treasurer—GEORGE H. MORGAN.

1866.

President—E. O. STANARD.
Vice Presidents—ALEX. H. SMITH, DANIEL G. TAYLOR.
Secretary and Treasurer—GEORGE H. MORGAN.

1867.

President—CHARLES L. TUCKER.
Vice Presidents—EDGAR AMES, DANIEL G. TAYLOR.
Secretary and Treasurer—GEORGE H. MORGAN.

1868.

President—JOHN J. ROE.
Vice Presidents—GEO. P. PLANT, H. A. HOMEYER.
Secretary and Treasurer—GEORGE H. MORGAN.

1869.

President—GEORGE P. PLANT.
Vice Presidents—H. A. HOMEYER, NATHAN COLE.
Secretary and Treasurer—GEORGE H. MORGAN.

1870.

President—WM. J. LEWIS
Vice Presidents—GEO. G. WAGGAMAN, H. C. YEAGER.
Secretary and Treasurer—GEORGE H. MORGAN.

1871.

President—GERARD B. ALLEN
Vice Presidents—R. P. TANSEY, GEORGE BAIN.
Secretary and Treasurer—GEORGE H. MORGAN.

1872.

President—ROBERT P. TANSEY.
Vice Presidents—W. H. SCUDDER, CHAS. H. TEICHMAN.
Secretary and Treasurer—GEORGE H. MORGAN.

Officers of the Union Merchants' Exchange, for

1873.

PRESIDENT.

WM. H. SCUDDER.

FIRST VICE PRESIDENT.

S. M. EDGEELL.

SECOND VICE PRESIDENT.

WEB. M. SAMUEL.

DIRECTORS.

R. P. TANSEY,
GERARD B. ALLEN,
WM. HAMILTON,
E. W. LEONHARDT,
REDMOND CLEARY,

JOHN W. CARROLL,
EDWARD JACKSON,
WM. CURRIE,
PAUL WRIGHT,
SAMUEL PELTZ.

SECRETARY.

GEORGE H. MORGAN.

ASSISTANTS.

D. R. WHITMORE,

D. H. BARTLETT.

COMMITTEE OF APPEALS.

S. H. RICHARDSON,
JOHN WHITTAKER,
A. K. NORTHRUP,
H. C. HAARSTICK,

LEVI L. ASHBROOK,
W. B. HASELTINE,
WM. C. BUCHANAN,
FREDK. BOHLE,

W. S. HUMPHREYS,
ED. SPENCER,
HENRY KALBFLEISCH,
W. H. GREGG.

COMMITTEE OF ARBITRATION.

THEO. BARTHOLOW,
CHAS. HOFFE,
J. H. BORGESS,

E. C. CHAMBERLIN,
JAMES REILLEY,
WM. A. BRAUNER,
E. S. WALTON.

LOUIS FUSZ,
GEO. J. PLANT,
A. EINSTMAN.

NEW EXCHANGE BUILDING.

Since the organization of the Union Merchants Exchange, its members' have so increased, with the growth of the city, as to require a larger and more commodious building wherein to transact the growing business of the Great Metropolis of the Mississippi Valley. Preliminary steps have therefore, been taken, to erect a new Exchange building, on the block bounded by Chestnut and Pine and Third and Fourth streets;—the building to cost \$5,000,000, and to be the finest exchange in the country.

As to the commerce of St. Louis, the evidences are to be seen everywhere, to prove its rapid and expanding growth. But yesterday it was the taunt of jealous rivals, that St. Louis merchants clung, with tenacious conservatism, to the old customs and forms of commerce, while other cities led the way, to cheap transportation, and greater facilities. "But ill-founded contempt has always been a blow that rebounds." The grain trade of St. Louis is on the rapid increase, and elevators will soon be as numerous as mills and foundries. Already this city can number the St. Louis elevator, the east St. Louis elevator, the Venice elevator; and besides these, there are several new ones proposed, such as the Advance Elevator and Fairamore warehouse, the Pacific Railway

Cash and Deposits in other Banks.....	10,902,453 41
Five had capital and surplus exceeding.....	\$1,000,000
Five “ “ “ “.....	500,000
Eight “ “ “ “.....	250,000
Seventeen “ “ “ “.....	100,000
Eighteen “ less than.....	100,000

The operations of the banks, through the Clearing House are given below, and indicate not only the increase in the banking business of the city, but also all other kinds of business, as the banks are only a part of the means by which other kinds of business are done. This statement shows the monthly clearings, comparatively, for the years 1869, 1870, 1871, 1872:

MONTHS.	1869.	1870.	1871.	1872.
January.....	\$57,688,226 36	\$59,233,322 62	\$75,610,676 56	\$82,284,401 98
February.....	46,664,787 12	53,281,286 50	59,424,324 18	70,285,701 06
March.....	52,407,642 54	62,040,575 18	71,264,501 96	80,556,905 64
April.....	51,373,701 20	65,716,992 00	69,938,400 72	87,234,378 68
May.....	53,787,979 92	73,618,227 16	73,427,624 74	87,845,145 20
June.....	53,353,781 62	68,248,274 80	71,791,607 72	78,315,066 26
July.....	50,935,806 04	69,083,282 28	72,092,996 54	82,199,775 72
August.....	50,540,733 14	64,381,275 20	65,502,442 54	76,724,920 04
September.....	50,608,439 94	59,975,993 84	70,767,531 92	77,921,101 40
October.....	56,447,015 18	65,766,001 62	75,917,906 12	93,472,394 56
November.....	61,415,148 20	64,504,192 86	76,202,109 78	.....
December.....	66,966,034 26	75,103,121 08	83,442,231 68	.....
Totals.....	\$653,589,293 52	\$780,954,545 14	\$865,382,355 46	\$816,839,790 54
Monthly average.....	\$54,465,774 46	\$65,079,545 43	\$72,115,196 29	\$81,683,979 05

IRON MANUFACTURE IN ST. LOUIS.

Henceforth whoever discusses the material growth of St. Louis, must place first in the list of her important interests, her iron manufactories. In these must grow her greatest power, her greatest wealth. Advanced civilization has proven that there is no wealth beneath the surface of the earth equal to that afforded by iron. Neither gold nor silver, precious stones nor pearls are half so valuable to man.

Perhaps the value of iron can be no better illustrated than by the following beautiful passage from Edward Everett:

"I have now in my hand," said Edward Everett, "a gold watch, which combines embellishment and utility in happy proportions, and is often considered a very valuable appendage to the person of a gentleman. Its hands, face, chain and case are of chased and burnished gold. Its gold seals sparkle

with the urby, topaz, sapphire, emerald. I open it and find that the works, without which this elegantly furnished case would be a mere shell—those hands motionless, and those figures without meaning—are made of brass. Investigating further, and asking what is the spring, by which all these are put in motion, made of, I am told it is made of steel! I ask, what is steel? The reply is that it is iron which has undergone a certain process. So, then I find the mainspring, without which the watch would always be motionless, and its hands, figures and embellishments, but toys, is not of gold that is not sufficiently good, nor of brass that would not do, but of iron. Iron, therefore, is the only precious metal, and this watch an emblem of society! Its hands and figures which tell the hour, resemble the master spirits of the age, to whose movements every eye is directed, its useless but sparkling seals, sapphires, rubies, topazes and embellishments are the aristocracy. Its works of brass, are the middle class, by the increasing intelligence and power of which the master spirits of the age are moved; and its iron mainspring shut up in a box, always at work, but never thought of, except when it is disorderly, broken, or wants winding up, symbolizes the laboring class, which, like the mainspring, we wind up by the payment of wages, and which classes are shut up in obscurity, and though constantly at work, and absolutely necessary to the movement of society, as the iron mainspring is to the gold watch, are never thought of, except when they require their wages, or are in some want or disorder of some kind or other."

The political and industrial rights and privileges of the laboring classes should not be lost sight of by legislators. Educate and develop them, and they, in return, will bring iron out of the mountain in greater abundance; will, by their superior intelligence, invent machinery, by which most of the labor of life may be performed; "make two blades of grass grow where but one grew before;" and thus, as in all other things, set the world ahead. The locomotive, steam-engine, telegraph, printing-press, sewing-machines, mowers, reapers, seed-planters, harvesters and so forth, will continue to be invented and improved just in proportion to the education and development of our people, and especially of the working classes.

While it is not within the province of this book to enter into a discussion of the importance of iron, as a metal, to civilized men, but rather to show how St. Louis is growing as an iron manufacturing city, the existing magnitude of the iron interests in this city and the great importance attaching to their further development in the future, give a particular attraction to any intelligent views and thoughts on the subject, and the following communication from Mr. John Magwire, an excellent authority, will be read with interest:

L. U. REAVIS, Esq.:

SIR:—You have requested me to give in writing my views concerning the manufacturing of articles at St. Louis, especially iron. In September, 1866, by request of several gentlemen connected with the St. Louis Agricultural and Mechanical Fair, I wrote an essay upon the advantages and adaptability of St. Louis as a manufacturing city of all articles manufactured in other cities of the United States. When the Lindell Hotel was burned, the essay, which they had published in pamphlet form, was destroyed, except the few copies that had been distributed. The State Agri-

cultural Society had the essay published in their report for that year, and you will find it commencing on page 122 of the Agricultural Report of the State of Missouri. That essay contains, as I believe, the facts sufficient to show the advantages at St. Louis for establishing manufactories of all fabrics needed by the people, and the advantages as a point for distributing without the intervention of commission merchants or middle-men. I do not think that I can add anything of importance to what you will find in that essay, except to advert to the results in making iron, so abundantly proved by the working of the furnaces that have gone into operation since 1866. These results, however, are so well known now by all persons familiar with making iron that it is hardly necessary to write them in a book. Everybody now knows that, owing to the richness and fusibility of Missouri ores, furnaces using those ores and raw Illinois coal mixed with coke, yield from twenty-five to thirty per cent. more iron per day than furnaces of the same dimensions in any other locality of this country or in Europe, and that the quality of the iron is excellent; that enough good iron can be produced from Missouri ores and Illinois coal to supply the wants of the country; and the fact is now also well known that good pig-iron can be produced in Missouri and Illinois at a cost of labor varying not far from that required in Wales (England), which is the most favorable country of Europe for making iron. There are greater facilities for obtaining ore and coal in Wales than any other country of Europe, but neither in Wales nor upon any other part of the earth's surface, so far as my information goes, are ore and coal so accessible as in Missouri and Illinois. It must be borne in mind that all manufacturing, especially iron, is produced by labor; and in the production of iron, until the discovery by Bessemer, the refining of iron from the pig into the bloom, or bringing it to "nature," as the refiners term it, was the hardest and the most toilsome labor that man had ever been required to perform. This labor must be performed upon our pig-iron as now made in order to produce merchantable iron or rails, and the cost of producing pig-iron is better determined by the quantity one man can make in a day, than by the amount of dollars and cents or shillings and pence he is paid. It requires, in Wales, the labor of one man for thirteen days to produce a ton of pig-iron, or thirteen men one day. In Missouri and Illinois the labor of one man, eight days, or eight men one day, can make a ton of pig-iron, which will make a rail that will last three times as long as the ordinary Welsh rail. In Wales the subsistence of the thirteen men, their food and shelter, is equal to the labor of five men; in the Mississippi Valley, subsisting eight men requires the labor of three men. Now here is the difference in cost of producing iron: eighteen men in Wales and eleven in Illinois and Missouri, and the Missouri rail will last three times as long as the common Welsh rail. Good rails are made in Wales, but at additional expense over the ordinary mode, which makes an inferior rail. Bad rails cannot be made of Missouri iron, if proper attention is given, in the ordinary mode.

In the face of these facts our railroad companies are compelled to import rails from Wales. This raises a question which, when inquired into, puts a terrible responsibility upon our American statesmen. That the responsibility of depriving the American manufacturer of the facilities to make all the rails needed in this country, must rest upon the conscience of our American statesmen. I am prepared to demonstrate unmistakably; the proof is at hand, but it would be out of place in your book. The working of the furnaces in Missouri and Illinois have proved that a sufficiency of iron can be produced, and although the iron is of a superior quality, now since steel can be made from the pig-iron by using the elements which nature has provided, and machinery that the genius of man has invented, doing away with the labor of puddling, and our Missouri ore is, with one other exception in the United States, the only ore adapted to making steel by the Bessemer or pneumatic process, our iron business will not be complete until that mode is fully put into operation here, and in place of the uncertain iron-rail, steel-rails can be furnished that will last seventeen times as long as iron rails. The Pennsylvania Central road is now, I am informed, re-laid with steel-rails, and the pig-metal, or a portion of it, used at the mills in this country to make rails for the Pennsylvania road, was imported from England, where the ore is inferior to Missouri ore, and the coal no better, and not as accessible as Illinois coal. The explanation is this: steel cannot be successfully made by the Bessemer or pneumatic process unless the pig-iron is free from sulphur or phosphorus; two per cent. of sulphur will not hurt, but one-tenth of one per cent. of phosphorus is fatal. Such metal could not be obtained in this country in sufficient quantity. None of the

stone-coal iron would answer, and the quantity of charcoal pig is small and every day decreasing, and there is not much of it that will answer. But next to Bessemer's discovery, and one that will revolutionize the iron business, is the process of freeing mineral coal from sulphur and all other foreign substances, leaving pure carbon to go into the coke oven. The coke made from coal that has been freed from sulphur and other substances, leaving only the carbon, is as good in one locality as another; the carbon of coal is alike everywhere, and pig-iron made from Missouri ore, with coke, from coal that has undergone the purifying process, will answer for making Bessemer steel. The Illinois Patent Coke company in East St. Louis, Theodore Meier, President, have erected works for making coke by the Osterspays patented process, and will in a short time be prepared to deliver to furnace-men 2,500 bushels per day, and there is no limit to the quantity that can be made. The process of purifying the coal, the crushing and washing, is done by machinery, only requiring the labor of three men and the machinery one day to receive from the cars and deliver the purified coal into the coke ovens. The coke made from the pure carbon is compact and heavy; it will carry a seventy per cent. ore on a twenty-foot bosh, and a furnace of that size using this coke will yield daily fifty tons of metal. There will be no uncertainty as to the quality; it will be uniform day in and day out; every ton may be relied upon with perfect certainty as suitable for Bessemer steel. The working of a furnace with raw coal is a lottery; some days the metal will be good and the next day bad. Uniformity is not to be expected, and never could be had with all the skill that could be applied.

By the discovery of Osterspays, the making of pig-metal with Missouri ore will become an exact science. And since the coal of one locality can be made as good as any other, and it having been demonstrated that Missouri ore is peculiarly well adapted for making steel, ought to settle the question you propose.

JNO. MAGWIRE.

St. Louis, Nov. 10, 1872.

IRON FURNACES AND MILLS IN MISSOURI, THEIR CAPITAL AND CAPACITY OF PRODUCTION.

Notwithstanding the immense store of mineral deposits in Missouri, art and industry have done comparatively little, in rendering these mines of wealth serviceable to the people of the country. The following statement of the furnaces now in operation, show the development and practical workings of St. Louis in the iron interest at the present time.

CHARCOAL FURNACES.

	Furnaces.	Capital.	Capacity, Tons.
Pilot Knob	2	\$1,000,000	12,000 ..
Iron Mountain.....	2	1,000,000	12,000 ..
Irontide.....	1	300,000	7,000 ..
Meramec.....	1	300,000	6,000 ..
Scott.....	1	250,000	7,000 ..
Moselle	1	250,000	6,000 ..
Gasconade one building.			
Total.....	8	\$3,100,000	50,000 ..

STONE-COAL AND COKE FURNACES.

	Furnaces.	Capital.	Capacity, Tons.
Vulcan.....	2	\$250,000	25,000 ..
Lewis	2	250,000	25,000 ..
South St. Louis.....	2	250,000	25,000 ..
Carondelet.....	1	150,000	8,000 ..
Total.....	7	\$900,000	83,000 ..
Four more projected at Carondelet.			

ROLLING MILLS.

	Capital.	Capacity, Tons.
Laclede Rolling Mills.....	\$500,000	10,000
Vulcan Iron Works.....	200,000	40,000
Total.....	\$,700,000	50,000

RECAPITULATION.

	Capital.	Capacity, Tons.
15 furnaces.....	\$1,000,000	133,000
Mills.....	1,000,000	40,000

VALUE OF PRODUCTS.

133,000 tons pig iron, at \$35.....	\$4,655,000
10,000 tons merchant iron, at \$85.....	850,000
Annual product value.....	\$5,505,000

The following additional facts are of interest, showing the iron produced in 1870:

Pig-Iron produced by Pioneer Carondelet Furnace.....	6,000 tons.
" " " " Kingsland ".....	12,000 "
" " " " South St. Louis ".....	6,500 "
" " " " Lewis Iron Co.'s ".....	6,000 "
" " " " Iron Mountain ".....	8,553 "
" " " " Pilot Knob ".....	2,423 "
" " " " Irondale ".....	3,993 "
" " " " Scotia Iron Co.'s ".....	2,440 "
" " " " Moselle ".....	3,000 "
" " " " Meramec ".....	4,000 "
Aggregate production of Pig-iron in 1870.....	54,911 tons.

	1868.	1869.	1870
Tons ore mined.....	105,000	195,000	316,000
Tons ore shipped.....	47,000	120,000	246,555

The following tables show the shipments of iron ore, from the two important iron regions of the state, also the shipment of pig iron.

Shipped over the Iron mountain Railroad:

[See next page.]

Shipped over the Atlantic and Pacific railroad:

ATLANTIC AND PACIFIC RAILROAD.

Statement of Iron Ore shipped from sundry stations from 1st July, 1871 to 31st October, 1872.

STATIONS.	1871.	1872.	1872.	TOTAL.
	1st July to 31st Dec.	1st Jan. to 30th June.	1st July to 31st Oct.	
	TONS.	TONS.	TONS.	TONS.
Iron Ridge.....	4,890	2,920	8,190	16,000
St. James.....	2,590	9,570	1,760	13,920
Taylor's.....	20	220	150	390
Buckland's.....		220	1,120	1,340
Beacon.....		1,870	5,410	7,280
Kelley's.....			60	60
Hancock.....			420	420
Leasburg.....			130	140
	7,500	14,800	17,240	39,540

FOUNDRIES AND STOVE ESTABLISHMENTS.

The magnitude and importance of the foundry and stove business of St. Louis, compare favorably with the furnaces and rolling mills, of the city, and contribute largely to the growth and greatness of the iron business, as will be seen below:

[See next page.]

TABLE, SHOWING THE FOUNDRY BUSINESS OF ST. LOUIS.

NAMES OF COMPANIES.	CAPITAL STOCK.	CHARACTER OF BUSINESS.	ANNUAL CONSUMPTION OF IRON—TONS.	ANNUAL AMT. BUSINESS.	NO. OF HANDS EMPLOYED.
Shickle, Harrison & Co.....	\$400,000	{ Architectural Iron Works, and Cast-Iron } Water and Gas Piping.	7,500	\$750,000	350
Ghirard B. Allen & Co.,	\$250,000	{ Foundry and Steam Engines, and General } Machinery.	2,100	\$400,000	130
Allison & Rohan,		Boiler and Sheet-Iron Works.	712	\$178,000	75
G. H. Timmerman & Co.,	\$125,000	Machinery and Engine Work.	1,200	\$200,000	60
Marshall & Co.,	\$200,000	Foundry and Machinists.	2,500	\$300,000	130
Alex. Crozier & Co.,	\$100,000	Mill and Steamboat Machinery.	4,000	\$150,000	140
G. M. Shepley & Co.,	\$50,000	Malleable and Gray Iron Works and Castings.	4,000	\$100,000	50
McMurray, Smith & Judge,	\$40,000	Architectural Iron Works for Houses.	1,200	\$130,000	60
Collins & Holliday,	\$150,000	{ All kinds of Steam Engines, Blast Furnaces } and Steamboat Work.	1,200	\$150,000	100
St. Louis Car-Whee. Company,	\$50,000	Car Wheels and Railway Castings.	4,500	\$250,000	40
Missouri Car and Foundry Company,	\$250,000	All kinds of Freight Cars.	Large consumption of Iron and Wood.		600
St. Louis Stamping Company,	\$150,000	Stamped Japan, Tin and Iron Wares.	1,400 boxes Tin Plate, 15 tons wire. 15 tons of Hoop Iron. 125 tons of Sheet Iron. 12 tons of Block Tin.	\$400,000	175
Lafayette Foundry and Machine Shop,	\$100,000	Stationary and Portable Engines.	1,200	\$350,000	125
Joseph F. Waugler,	\$30,000	Boiler and Sheet-Iron Works.	300	\$125,000	50
St. Louis Railway Supply Company,		Railway Supplies.	1,000	\$500,000	50
Mississippi Iron Works,	\$170,000	House Iron Works.	1,500	\$300,000	150
Helmbacher,	\$150,000	Forge and Rolling Mills.	14,000	\$800,000	250
A. McDonald & Co.,	\$100,000	Steam Forge and Rolling Mills.	7,500	\$300,000	100

TABLE, SHOWING THE STOVE BUSINESS OF ST. LOUIS.

NAMES OF COMPANIES.	CAPITAL STOCK.	CHARACTER OF BUSINESS.	ANNUAL CONSUMPTION OF IRON—TONS.	ANNUAL AMT. BUSINESS.	NO. OF HANDS EMPLOYED.
Excelsior Manufacturing Company	\$367,900	All kinds of stoves.	500	\$1,200,000	350
Bridge, Beatt & Co.,		Refused to answer questions.			
C. Gage & Co.,	\$285,000	Manufacturers of stoves.	1,700	\$170,000	120
Buck & Wright,	\$500,000	Manufacturers of stoves.	2,000	\$300,000	140

EXCELSIOR STOVE COMPANY.

From the more elaborate character of the iron manufactures—from the Foundries and Rolling mills, we pass to the most important feature of the stove business. St. Louis is already noted for its many stove establishments, and the popularity of the stoves manufactured by the various companies now in existence. At the head of the stove business of St. Louis, and we may say of the United States, stands the Excelsior Manufacturing Company. This company has grown in business and character, with the city of St. Louis, itself, and is one of the great establishments, that give prominence and worth to the business of the metropolis of the Mississippi Valley.

This mammoth company, was organized in 1849, by Mr. Giles F. Filley, who has continued at the head of the company, and with his keen foresight and wide-grasping, executive ability, has directed its business, with safety and success, and now he is at the head of the largest stove company in the world.

The first buildings were erected and operations commenced, Sept. 1849, under the name of the Excelsior Stove Works, making that year 634 stoves; using about 60 tons of pig iron, which came from Ohio. During the following years 5,977 stoves were made and about 600 tons of iron used.

From 1849 up to the present date, 1872, their business has gradually increased, producing in round numbers 550,000 stoves of all kinds, consuming 66,000 tons of iron.

In 1865, the Excelsior Manufacturing Company was organized, under a special charter, with a capital of \$400,000, which continues under its present officers, to-wit: G. F. Filley, president; James W. Bell, secretary; and Mr. E. C. Little, superintendent.

The company made during the year 1872, 45,000 stoves, which required the consumption of 6,000 tons of iron, two-thirds of which was made of Missouri ore, and smelted in St. Louis.

The sales of the company extends to twenty-eight States and Territories, reaching east as far as Pennsylvania and west to California, north to Minnesota, south to Florida and Texas, beside many that are sent to Germany and England.

The best cooking-stove made by this company is the celebrated Charter Oak. The sales of the first year of this company, amounted to 2,619 stoves. The year following 4,785. The number has annually increased until it has reached 22,000. At the present date there are over 200,000 of these celebrated stoves in use or have been in use, cooking the food for more than one 35th part of the population of the United States. There are 52 different varieties of the Charter Oak stoves made, burning wood, coal and coke.

What better evidence could be offered to show its great popularity, when after being in use 20 years, it stands unrivaled before the public.

The most popular heating stove made by this company is the Evening Star, which is now in use in nearly all the western States and Territories. In addition to these, an almost endless variety of other patterns are made to supply the wants of the country.

The employees of this company, number 350, whose monthly wages amount to \$23,000, supporting at least 1,500 people, including women and children.

THE ST. LOUIS STAMPING COMPANY.

Another of the leading manufacturing establishments of St. Louis, deserving of note, is the Stamping Company. This, although new, is not surpassed in size and character in the United States. The building is of the largest class used for manufacturing purposes, and is thoroughly filled with the best kind of machinery for making all classes of stamped and Japan wares. For the existence of the branch of industry that this company represents, the credit is due to the Messrs. Neidringhaus, who are the owners and under whose well-directed supervision the business is now conducted, in the most business-like manner, and with the greatest integrity.

The above facts and statistics substantially represent the present development of the iron manufacturing interest of St. Louis. And every citizen of the metropolis, will read and ponder them with pride and gratification, for in them are to be seen the evidences of substantial and rapid thrift, in a department of industry and wealth, destined to revolutionize the present vulgar conception of the greatness of St. Louis of to-day, and build in the heart of the continent, in the heart of the great valley of the Mississippi, a wealth and a power stronger than armies and more potent than kings.

Not only is the iron manufacturing interest of St. Louis rapidly advancing, but it is in a healthy condition. It is not only backed by wealth, but by vigorous and sterling men, capable and comprehensive, to understand, to dare and to do. And to what extent, they and others will yet push forward this great industrial agency of man, no human can tell. For whereas, we now have less than twenty furnaces, we shall have in less than a generation one hundred. Capital and skill will be made to subserve their highest use, in the development of this most valuable of all metals, iron, and the productive energies of two mighty States will be joined—the coal of Illinois and the iron of Missouri, to mould in to use, implements of art, for the many millions destined to reside in this great valley. At St. Louis and vicinity will yet grow up, in one group, a new and mightier Birmingham, Sheffield and Staffordshire. Genius and capital will unite with the ruder substances of nature, and the banks of the Mississippi, will be lighted, for hundreds of miles, with constantly ascending flames from the forges, mills, foundries and work-shops; yet to be the offsprings of the progress and greatness of this people. Let us anticipate these things and take new courage in the duties of to-day. Let us comprehend that what our metropolis is to-day, is only the germ of what she is to be in the years of the future.

COAL.

The total receipts of coal for 1870 were 957,259 tons, or 23,931,475 bushels. The coal resources contiguous to St. Louis are inexhaustible, and nature appears to have prophetically provided them to assist in the full development of our iron manufactures.

ZINC.

There are two or more zinc mills in St. Louis, doing a fine business.

The product of this metal in this State during the years mentioned was :

	1869.	1870.
Zinc ore produced, lbs.....	4,270,400	8,240,000
Zinc metal—spelter.....	723,000	1,545,930
Value of.....	\$70,470	\$131,404
Zinc slabs exported.....	12,449	49,549

LEAD.

The following lead statistics, show what is doing in the department of the production of lead in the state of Missouri, and St. Louis its market.

1869.	Pigs.	Pounds.
The Product of Missouri.....	172,697	12,963,975
Received from the Galena, and other mines.....	42,576	3,193,200
Foreign "imported".....	7,857	1,021,410
Total.....	223,130	17,178,585
1870.		
The Product of Missouri.....	188,383	14,128,725
Received from the Galena, and other mines.....	42,342	3,175,650
Foreign "imported".....	4,178	543,140
Total.....	234,903	17,847,515
1871.		
The Product of Missouri.....	181,691	13,676,883
Received from the Galena, and other mines.....	45,829	3,822,630
Foreign "imported".....	1,440	233,625
Total.....	228,960	17,433,138
1872.		
The Product of Missouri.....	156,578	12,526,240
Received from the Galena, and other mines.....	24,855	1,864,125
Total.....	181,433	14,390,365

THE COLLIER WHITE LEAD AND OIL FACTORY.

In this connection the Collier White Lead and Oil Mill is worthy of mention, as the largest establishment of its kind in the Mississippi Valley.

Perhaps there is no manufacturing enterprise in St. Louis, deserving mention in public print more than the Collier White Lead and Oil Company. It was established in 1837, incorporated in 1850, and may be considered among the antiquities of St. Louis. This old and widely-known manufacturing establishment, the products of which have no superior, and whose manufactured leads are sought for and used throughout the entire Mississippi Valley, on account of the superior covering capacity, durability and opacity of the same, is capable of manufacturing, annually, five thousand tons of the carbonate of white lead, two hundred and fifty tons of red lead and lytharge, and two hundred thousand gallons each of castor and linseed oils. Has a paid up capital of six hundred and fifty thousand dollars. Manufactures white and red leads, lytharge, castor and linseed oils, acetic acid and cooperage, for their own purposes. Annual amount of business is over one million dollars. Annual

amount of raw materials used, two thousand five hundred tons; pig lead, fifty thousand; fifty bushels of castor beans, and forty thousand bushels of flax seed.

Pig lead is obtained principally from the mines of Missouri, Illinois, Iowa and Wisconsin, some portion imported.

Castor beans are grown and obtained from Missouri, Illinois and Wisconsin.

Flax seed are grown and obtained from Missouri, Illinois, Iowa, Wisconsin and Kansas. The number of hands in actual employ, averages from one hundred to one hundred and twenty. The pigments of this well-known company, are sought for by all consumers and dealers in paints; thus creating a continued, increased demand for the products thereof, necessitating annually a continued, increased production of its manufactures, in order to keep pace with the gradual and rapid growth of the "Great West," of which the "Future Great City," is the seat of empire.

Mr. Thomas Richeson, one of the most gentlemanly and enterprising of our citizens, is president of this mammoth company.

FLOUR AND GRAIN.

Of the different branches of manufacturing industry, now in operation in St. Louis, that of manufacturing flour has been, for thirty years, the largest and most important, and in the future, will no doubt, be only second to the manufacture of iron.

One of the natural results of the situation of St. Louis in the center of a fertile and extensive wheat region, has been the rapid development of the flour trade, and in this branch of domestic manufacture she is already famous, we might say on both sides of the Atlantic. And in this interest, as much as any branch of industry, do we find the marked evidences of a transfer of material power from the east to the west. A little more than a generation ago, Richmond, Baltimore and Rochester were famous for their fine mills and choice brands of flour. They, very naturally, became flour producing centers, because of the position each occupied in relation to the fine wheat producing regions around them. Richmond was supplied from the choice wheat of the Shenandoah Valley, Baltimore received hers from the fine wheat regions of Maryland, and Rochester hers from the Genessee Valley. Each region of country, producing the best quality of wheat, and each mill contested for years, for the merit of producing the best flour in the markets at home as well as abroad. The Rochester mills supplied the New England markets with the best family flour, while those of Richmond, did a large trade in South American markets. The Baltimore millers supplied an extensive trade and secured fair gains for their labor by an honorable rivalry with those of Richmond and Rochester. As the pioneer and the emigrant journeyed westward, new fields of industry and production were opened, and brought into requisition to supply the constantly growing population west of the Alleghanies, and with the growth of the country new centers of trade and manufacturing industry grew up.

In 1832, Cincinnati became a western center for the manufacture of flour.

The growth of the west and the newness of the soil stimulated her milling interest, and she soon became the great source from whence flour was supplied to the west and the south. Her millers supplied the emigrant and the trader, alike, as far west as St. Louis and as far south as the gulf. They held undisputed sway in the flour trade, until 1840, when the production of wheat in Illinois caused the building of mills in St. Louis, which at once supplied the home demand and made her a flour center, destined to rival and surpass in the number of her mills and the manufacture of choice qualities of flour, Richmond, Baltimore, Rochester and Cincinnati. St. Louis became a competitor of Cincinnati for the trade of the south, which compelled her millers to make good flour. Stimulated by the sharp contest of rivalry, she has grown to be the great flour center of North America. The character of her millers, for honor and integrity, stands second to none in the country, and the quality of her flour is not surpassed in the markets of the world.

One of the special causes that led to the establishment of the high character of St. Louis millers and their flour, has been the great amount of custom work which they have always done. This special work demanded special attention, on the part of the millers, and the result was an enduring reputation for making the best quality of family flour.

But let us go back a moment in the discussion. While it is true that new flour centers grew up with the westward movement of population across the continent, it is also true that the gradual decline in the productive energies of the soil in the older states of New York, Maryland and Virginia, aided largely to facilitate the growth of the flour business west of the Alleghanies, where the soil was new and more productive. The same cause operates to-day in favor of maintaining the supremacy of St. Louis in the flour manufacture of the country. Not, only so, but she is geographically situated in the center of the great fall wheat producing region of the continent—a region, the productive power of which cannot be exhausted, within the period allotted, by Providence, for man to exist on the continent. Probably not more than one-tenth of the wheat region, I mean that region that produces the delicate choice qualities of fall wheat, which the St. Louis millers must always control, and draw their supplies from, has yet been brought into requisition. Making the Wabash the eastern boundary of the region from whence she draws her supplies of wheat, that portion of Illinois and northern Missouri that contributes to her trade, forms but a small portion of the still uncultivated lands of Missouri, Kansas, Arkansas, the Indian Territory, Texas, New Mexico and the farther west, which are destined to contribute to her millers, through scores of generations yet to come, a still better quality of wheat than now constitutes the dominant supply in the market.

St. Louis stands pre-eminent, from the fact that the best fall flouring wheat is grown south of Quincy, and even of this city, convenient to the vast coal-fields, the source of motive power, and other supplies essential to domestic industry, and thus the bread-producer, bread-maker and bread-consumer are side by side, in natural aggregation, a circumstance of vast importance, in view of the future growth and welfare of St. Louis.

Cincinnati is no longer a rival of St. Louis in the manufacture of flour for market, for the people of Ohio consume the wheat raised in their own State, and there is no surplus to go abroad. St. Louis therefore stands pre-eminently the great flour center of the country, destined to control the surplus wheat from which the distant markets are to be supplied. Chicago may boast of her grain trade, but the facts demonstrate that trade is not equal in value to the flour interest of St. Louis.

The Chicago market may control the inferior wheats of the extreme northwest, which constitute the export wheats, but the St. Louis market will ever control the delicate choice fall wheats, which constitute the bread-stuffs of the American people, and which are grown in the central and south-western portions of the country. Already St. Louis supplies the citizens of Chicago with their best flour.

Nearly all the grain brought to St. Louis is manufactured by her millers, thus giving employment to thousands of people, and contributing at least 15 cents, per bushel, in the way of wages, to the actual industry and business of the city. Chicago only gains from 3 to 4 cents per cent. in the way of storage, interest and exchange, on each bushel of wheat her merchants handle, and that gain is confined to only a few persons, whereas the milling business of St. Louis distributes labor to many thousands of people. In fact, it is said on good authority, that the milling business alone of St. Louis, supports a population of 75,000, directly and indirectly. But the great trade of the St. Louis flour men is with the southern States. And while two-thirds of all the flour she manufactures goes directly to the consumers in the south, without any competition, it is with the south, St. Louis millers must continue to maintain their greatest field of operations. It is with the people of the southern States, that ours of the great central city must build up commercial relations,

"Wide as the waters be."

BRANDS OF FLOUR.

In former days the more important brands of St. Louis flour were as follows, Chouteau water mills, Page's steam mills, Gratiot street mills, Magnolia mills, Mound mills, Plant's extra, The Union steam, The Eagle steam, Monantum mills, Star mills, Missouri mills, Park mills, Cherry street mills, Fagin's four-ace, St. George mills. O'Fallon mill.

PRESENT MILLS OF ST. LOUIS, AND THE FLOUR MANUFACTURED DURING THE PAST FIVE YEARS.

MILLERS.	NAME OF MILL.	1871.	1870.	1869.	1868.	1867.
Kehler, Updike & Co.	Laclede	125,569	131,229	89,464	110,000	94,978
Kehler, Updike & Co.	Pacific	56,100	35,000	52,000	38,000	38,547
E. O. Standard & Co.	Eagle	114,621	99,630	84,916	64,700	66,199
John F. Tolle.	Park	101,320	82,000	78,000	75,000	40,000
John F. Tolle.	Cherry Street	88,746	77,820	71,400	68,000	63,400
Bain & Pegram.	Atlantic	129,359	117,960	75,395	75,000	65,149
Yeager & Co.	Union Steam	*32,347	75,603	52,110	34,000	27,700
Yeager & Co.	Anchor	125,790	60,385	60,000	19,601	13,403
E. Goddard.	United States	85,100	75,500	31,000	26,347	22,538
Empire Mill.	Empire	128,000	75,500	62,216	65,000	67,859
Tom Miller, Jr.	Phoenix	76,340	64,347	53,000	40,000	21,851
Geo. P. Plant & Co.	Franklin	68,347	66,000	69,981	53,200	54,779
Leonhardt & Schuricht.	Saxony	57,187	61,000	55,000	47,500	43,000
W. & R. Heinrichshofen.	Dyke	40,690	53,237			
J. F. Brocksmith & Co.	O'Fallon	41,134	46,655	34,000	24,000	39,850
Sessinghaus Bros.	Jefferson	33,378	41,700	25,800	10,200	4,485
F. Eickerman & Co.	Camp Spring	32,816	35,880	22,258	22,103	20,821
Kalbfleisch & Lange	St. George	33,914	33,870	32,000	20,540	24,242
Lallement Bros.	Carondelet City	9,000	17,250			
Smucker & Co.	Great Western	3,400	15,245	3,351	17,000	15,000
Charles Hezel.	East St. Louis	26,300	16,000	11,907	13,363	
V. Stoeck.	Star	38,800	12,500	25,401	13,000	18,000
	Sterling		6,500	3,600	20,000	2,500
Davis and Emmons.	Pearl	42,250	31,485	23,223	20,000	21,000
F. Buschman.	Gamble Spring	7,233	6,049	11,000		
	Exchange	7,000	6,580	27,200	14,410	
Wm. Ludwig.	St. Louis	3,150	6,908	11,000		
		1,507,915	1,351,773	1,068,592	895,154	765,298

* Only run four months.

FLOUR MANUFACTURED BY CITY MILLS FOR TWENTY-ONE YEARS.

YEAR.	BBLs.	YEAR.	BBLs.
1851	408,099	1862	906,860
1852	383,184	1863	758,422
1853	455,076	1864	782,560
1854	503,157	1865	743,281
1855	603,353	1866	818,300
1856	678,496	1867	765,296
1857	662,548	1868	895,154
1858	825,651	1869	1,068,592
1859	763,446	1870	1,351,773
1860	839,165	1871	1,507,915
1861	694,110		

During the past year, the manufacture of flour has increased from 1,251,773 barrels, in 1870, to 1,507,915, barrels, in 1871.

The following exhibit furnishes a condensed view of the operations of our millers during the past five years.

	1871.	1870.	1869.	1868.	1867.
Received	1,428,408 bbls.	1,491,626 bbls.	1,310,555 bbls.	805,836 bbls.	944,765 bbls.
Manufactured	1,507,915 "	1,351,773 "	1,068,592 "	859,154 "	765,298 "
Sold and shipped direct from country mills.	364,043 "	407,561 "	297,860 "	245,822 "	180,370 "
Total	3,300,366 bbls.	3,250,960 bbls.	2,677,007 bbls.	1,910,812 bbls.	1,889,743 bbls.

The total receipts and exports for six years ending 1870 were as follows:

TOTAL RECEIPTS FOR SIX YEARS.

ARTICLES.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Flour (reduced to wheat).....	7,142,040	7,458,130	6,552,775	4,029,180	4,720,375	6,043,630	5,805,190
Wheat.....	7,311,910	6,638,253	6,736,454	4,353,591	3,571,593	4,410,305	2,452,722
Corn.....	6,030,734	4,708,838	2,395,713	2,800,277	5,155,480	7,233,671	3,162,313
Oats.....	4,358,099	4,519,510	3,461,844	3,259,132	4,455,388	3,467,253	4,173,229
Rye.....	374,336	210,542	266,056	367,961	250,704	375,417	217,568
Barley.....	876,219	778,518	757,600	634,590	705,215	548,796	846,230
Total bushels.....	26,093,356	24,313,791	20,170,442	15,444,731	17,848,755	22,079,072	17,657,25

TOTAL EXPORTS FOR SIX YEARS.

ARTICLES.	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Flour (reduced to wheat).....	13,382,635	13,453,695	10,863,805	7,496,655	7,252,375	8,563,700	7,607,325
Wheat.....	1,048,532	634,562	1,715,005	543,234	321,888	635,817	62,860
Corn.....	4,460,849	3,636,069	1,298,863	1,611,618	4,318,937	6,757,199	2,591,558
Oats.....	2,481,582	3,144,744	2,103,002	2,952,529	2,244,756	2,624,044	3,083,864
Rye.....	138,756	100,254	110,447	192,555	59,076	223,458	31,445
Barley.....	62,843	70,451	57,134	64,426	55,750	89,751	50,000
Total bushels.....	21,587,187	21,039,766	16,148,756	11,860,097	14,249,752	18,835,969	13,427,052

The direction of the trade is thus indicated: Total shipments southward during the year 1870, 1,713,913 barrels. Total shipments eastward, 933,591 barrels. Total shipments to other points, 43,235. Total shipments during the year, 2,690,730 barrels.

There is every reason to be satisfied with the condition of the grain trade of St. Louis, while there are the most encouraging prospects for the future.

THE BREWERY BUSINESS.

Third in importance, in the list of the different branches of productive industry now in successful operation in St. Louis, stands the Brewery business. Perhaps one of hasty judgment would, considering the capital invested and the number of men employed to manufacture and sell beer, fix its rank next in importance to that of iron, as a productive industry. But when we consider that the milling business, relates more directly to the vital interests and necessities of the people, we must, in comparison to the capital invested and men employed to manufacture and sell flour, place the milling business of St. Louis, next in importance to that of iron, and greater than that of the Brewery business.

Considering the growth and the statistics of the Brewery business in this city; the vast capital invested, the annual business of the Breweries and the influence the manufacture and use of beer exerts upon the industrial and social interests of our society, we cannot pass the subject by, without giving it due weight and rank as a class of productive industry. And as will be seen by the figures below, an array of facts present themselves that are scarcely surpassed by the same class of business in any city in the United States. An invested capital of near \$4,000,000, and an annual productive yield of about the same amount, are items of no small concern in any branch of industry, based almost wholly on manual labor, and especially when such a branch of

industry is confined to the towns and cities, and has none of the fundamental elements of production, but grows out of supply and consumption.

The Brewery business of St. Louis, is very great. It adds vastly to swell the city's wealth and character. The brewers are moneyed kings, and have it in their power to do incalculable good to St. Louis, by aiding to advance her commercial and industrial interests, in the great struggle to become the metropolis of North America.

TABULAR STATEMENT OF THE BREWERY BUSINESS OF ST. LOUIS.

BREWERS.	Capital stock.	Annual value of business.	No. of bbls. manufactured annually.	No. of hands Employed.	No. of wagons Employed.		
					2 horse.	1 horse.	4 horse.
E. Anheuser & Co.....	\$250,000	\$210,000	2,400	40	5	2	
William Stampf.....	65,000	150,000	1,500	12	2	2	
William J. Lemp.....	200,000	400,000	40,000	60	2	2	
Jos. Uhrig.....	300,000	250,000	25,000	30	5	2	2
Feuerbacher & Schlosstien.....	300,000	24,000	24,000	30	4	2	
Samuel Wainwright & Co.....	300,000	24,000	24,000	30	5	1	
Anthony & Kuhn.....	150,000	150,000	15,000	30	4	2	
Nathus Wiss.....	5,000	120,000	12,000	15	3	1	
H. Grout & Co.....	150,000	150,000	14,000	15	3	1	
Klausermanse & Co.....	100,000	90,000	9,000	18	4	2	
Joseph Schneider.....	400,000	280,000	28,000	55	6	3	
John B. Fleming.....	20,000	50,000	5,000	20	2	2	
Christian Staehlin.....	500,000	200,000	20,000	40	4	2	
T. Spengler & Son.....	50,000	80,000	8,000	8	3	2	
John Kuepfert.....	22,000	50,000	5,000	4			
Louis Koch.....	100,000	165,000	16,500	20	4	2	
C. Kochler & Co.....	125,000	120,000	1,200	18	3	2	
Herold & Loch.....	120,000	150,000	16,000	20	8	1	
Joseph Feria.....	10,000	20,000	2,000	2		1	
Brinckwirth & Griesdiech.....	50,000	100,000	10,000	20	4	2	
Heidbreder & Niemann.....	30,000	60,000	6,000	10	2	1	
William Moran.....	25,000	45,000	4,500	6	2	1	
A. Leusher & Co.....	250,000	150,000	18,000	20	4	2	
Julius Winkelmeier & Co.....	300,000	300,000	30,000	40	5	1	
Chas. G. Steifel.....	140,000	175,000	18,000	24	4	2	
Totals.....	\$3,842,000	\$3,473,000	411,000	587	96	42	8

PROVISIONS.

The trade in provisions like most other great trades in the products of the west, is comparatively one of modern growth, so far as the interests of St. Louis and the country immediately tributary to it are concerned. For years St. Louis was a mere enterpot, a place of exchange, between the east and west; the rich fields of the north and the cotton and sugar regions of the south, in contradistinction to the productive capacity of the country immediately tributary to it, and it was not until the year 1861, when the production of provisions, like the extension of agriculture, the development of the inexhaustible mines of iron—the wonder of the world, coal, lead, copper, zinc and the rich depository for the manufacture of glass and queensware began to attract the attention of enterprising producers, who for a time seemed to struggle, almost unaided by capitalists, in the great work of developing the capacity of a country, which, whether regarded in its mineral, agricultural, mechanical, or commercial aspect, had few, if any equals, and taken as a whole, lying in the great valley of the Mississippi—equally distant almost between the lakes of

the north, the gulf of the south, the Atlantic and Pacific possessed natural advantages, which no other point in the world commands. As these advantages were opening to general attention, the war between the Northern and Southern states unfortunately commenced, and for several years diverted attention from peaceful duties—in the meantime, trade, improvement and progress were arrested, save in articles of war; the great interest of the country was merged in the more pressing necessity of conquering a peace, and thence of re-establishing a union among the several states, which was virtually accomplished by the fall of Richmond, but subsequently, more cordially confirmed by the generous acceptance of the situation “by the brave and good men who had so valiantly defended their rights during war, and nobly yielded to power when defeat became inevitable.” Coincidentally with the close of the war in 1865, the lessons of the camp, and the bravery of the field, were superseded by an earnest enquiry into the condition of the country; the most effective means not only of its recuperation, but by skill, art and industry, not merely to renew its onward progress, but to lift it above the ordinarily, impulsive and upward movements of a country so energetic as ours; and within the seven years intervening, more has been accomplished in the work of recuperation, of extending improvements, of building up manufactures, of creating cities, of constructing railways, of developing the inexhaustible riches (mineral and agricultural) not merely of Missouri, but of Arkansas, Kansas, Nebraska, Iowa and the far and “fairy country” beyond, to the Pacific, than had been done in the thirty preceding years, and many of them are so grand, if not so startling, that they look more like the work of some pure intelligence, than that of mere man, however aided by capital and the pent-up energies of an enterprising people. In the general onward march, the improvement and extension in provisions, have more than kept pace, since the natural, if not inevitable working of the trade was to drive the growth of hogs, cattle and sheep from the dear and impoverished lands of the east, to the cheap and richer ones of the west; particularly now that the whole country, even the wild prairies and the comparatively untrodden forest of the Indian, are so overrun with railways and approachable by the fleet-footed steamer, that any point on the continent,—across the Atlantic to Europe, or beyond the Pacific to the flowery regions of Asia is within reach, as is being daily demonstrated by shipments of hogs, cattle and sheep to the Atlantic coast, and the movement of cured meats from the west, even the extreme west to Europe, to the Atlantic Islands and via San Francisco, to South America and across the Pacific to Japan and China. This onward movement, from places of production to those of consumption, has been so great, so diversified, and so impulsive, that it has been impossible to chain it down to any regular order or system, or even to place it in such position that it may even be counted, much less estimated in the general products of the west. It is known that it is simply immense, that it is steadily increasing, that it may be seen moving in almost every direction, and that its importance is to be less estimated by the statistical reports at the cities, than the advices of individual operators in the interior, and the showings at the bankers and merchants of the cities; neither of which are accessible to a collator, and like other good things, among

them *the best*, must be accepted on faith. The capital, energy and enterprise of St. Louis, have been directed to the curing and preparing of provisions in the interior, for immediate transportation to markets of consumption or export, without touching at St. Louis, or appearing even indirectly as among its assets, which in the department of provisions amount to over \$30,000,000, at their present low value, or \$3,000,000 less than it was two years ago, when there was less done, and the market value was 40 cents, 50 per cent. greater than at present. Commencing some 20 years ago with a slaughter of 25,000 hogs, the business has been steadily progressive and has reached the full quota of 500,000, in addition to the product of 750,000 (unitedly 1,250,000 hogs) which is the estimated quantity of hogs and their products which have been handled by the packers and dealers during the season 1871-2. This quantity might have been materially increased, and would have been, but for the want of slaughtering facilities and the small number of persons engaged in the trade. This trade is steadily increasing, and as the growth of animals for food is not merely an acceptable, but the best and most remunerative, form in which the immense grain crops of the west can be brought to market, the business will go on increasing and still increasing, until it shall have reached a magnitude that will command the attention of the feeders of the world, as did that of Egypt in olden times. It is no part of our business to speculate—to indulge in reveries of fancy, but when a business swells into a magnitude bordering upon the fabulous, it is sometimes difficult to bind oneself down to the sober realities of the past and to permit the data of former years to become the basis of future calculation. This is too often done, as in no country, not even in the comparatively developed ones of Western Europe, is one year an index of another, and in a country so new, so forming and so developing as these western states, is there or can there be a similar recurrence of facts, hence the inapplicability of producing the events of the past, as evidence of what may be expected in the future; when population is increased, commercial requirements enlarged, and broader, wider fields of consumption become dependent upon the productive capacities of the west for food, to supply the increasing wants of older states and countries, whose population is compelled to relinquish agriculture, save of the most valuable kind, to leave their homes in a country comparatively worn out, and to seek the means of life and of enjoyment in the mechanic arts, in science, in commerce and their associate avocations. Evidences of this constant change from the fields to the work-shops and the studio, are found in the steady growth of cities, the increase of manufactures, the more imposing importance of commerce and the greater number of colleges, seminaries and studios of arts, which are being erected to meet the constantly growing avidity of the people for knowledge, as a means of avoiding hardships, and to give the graceful charm of elegance and comfort to the ordinary duties of life. It is only a few years ago, when the provision trade of the west was located in the country east of the Wabash river—then it amounted to less than 1,700,000 hogs; last year, within the so called "packing season," it was but little short of 5,000,000, and the great bulk of it was west of the Wabash, showing that its march is westward, and its great home, will be soon located west of the Mississippi—on the cheap

and productive lands of the west. In its new, and possibly permanent location, a point possessing such commanding advantages as St. Louis, for an exchange, via river and rail, between producers and consumers cannot be overlooked, and should be the grand depot for both sellers and buyers, and especially commends itself as the most desirable location in the west, for those seeking to avail of this great and growing trade, as the road to fortune. Our western packers, and especially those of St. Louis, though few in number, have fairly met the duty devolving upon them, have honorably accomplished a great work; but superhuman exertions cannot be accomplished by mere man, and they are excusable if in common with the interests of the country, they require aid, both men and money, to meet the revolution, the *coup de main*, the old foggy ideas of the world are to be changed—the new is to become feeders to the old, and the old manufactures and artisans for the new world.

The following figures show the growth as well as indicate the present *status* of the packing business in this city:

HOGS PACKED AT ST. LOUIS FOR NINE SEASONS

	1870-71.	1869-70.	1868-69.	1867-68.	1866-67.	1865-66.	1864-65.	1863-64.	1862-63.	1861-62.
No. Hogs	305,600	241,316	231,937	237,160	183,543	123,335	191,890	244,600	178,750	84,083
Av net wt	216	190 50-100	189 27-100	193 91-100	222 34-100	208 91-100	178 50-100	179	207	224 50-100

This department of business is one very much dependent on facilities for handling, and the means of easy communication with the States and sections of country producing the stock. A few years must necessarily make St. Louis, the first packing point in the West, as she possesses all the material advantages requisite to secure that position.

PACKING AT THE FIVE PRINCIPAL WESTERN CITIES.

St. Louis.....	Jan. 21, 1871....	264,699	Jan. 21, 1870....	221,222	Whole Season, 1869-70....	241,326
Chicago.....	" "	649,036	" "	454,637	" "	685,969
Cincinnati.....	" "	415,436	" "	318,160	" "	337,339
Louisville.....	" "	243,941	" "	180,449	" "	180,449
Milwaukee.....	" "	163,000	" "	130,000	" "	172,626
Total.....		1,736,112		1,304,468		1,617,690

LIVE STOCK.

The development of our Western system of railroads has greatly expanded our stock market, and the proportions it must assume in the future, with the completion of the bridge, the opening of other railroad lines, and of agricultural wealth, of the rich and boundless country to the west of us, must be enormous. The receipts and exports for the year, and other figures of interest and importance will be found in the following tables:

[See next page.]

LIVE STOCK.

RECEIPTS AND SHIPMENTS OF CATTLE, SHEEP AND HOGS FOR SEVEN YEARS

YEAR.	RECEIPTS.			SHIPMENTS.		
	Cattle.	Sheep.	Hogs.	Cattle.	Sheep.	Hogs.
1871.....	199,527	118,899	633,370	103,018	37,465	113,913
1870.....	201,422	94,477	310,850	129,748	11,649	17,156
1869.....	124,565	96,626	344,848	69,867	12,416	39,076
1868.....	115,352	79,315	301,569	37,277	6,415	16,277
1867.....	74,146	62,974	393,241	26,799	19,022	28,627
1866.....	103,259	64,047	217,622	24,462	15,194	13,363
1865.....	94,307	52,133	99,663	46,712	8,680	17,869

EXPORTS FOR THE YEAR.

ROUTES.	Cattle.	Sheep.	Hogs.
By River.....	6,543	9,185	10,037
St. Louis, Alton and Chicago Railroad.....	34,003	2,161	1,978
Indianapolis and St. Louis ".....	20,939	12,205	30,338
St. Louis, Vund. and T. Haute ".....	30,702	7,425	10,260
Ohio and Mississippi ".....	11,501	269	28,754
Toledo, Wabash and Western ".....	20,802	5,860	31,303
Other Routes.....	5,478	360	1,183
Total Exports.....	130,018	37,465	113,913

DRY GOODS TRADE.

The past year was satisfactory in its results in reference to this most important department of trade—more so, indeed, than any since the close of the year. It was characterized by a steady shrinkage in values; but the business done, although accompanied by a reduction of profits, was conducted on sound principles, with no tendency to over-trading. While the operations of the year afford unmistakable evidence of a general expansion in the trade, corresponding to the increase observable in every department of our city's commerce, it is indeed an undeniable fact, that already our dry goods merchants sell to a larger territory than any other city in the United States. Previous to the war the dry goods business ranged from \$10,000,000, to \$12,000,000, while now it aggregates \$50,000,000. The aggregate wholesales of dry goods and fancy goods reaches \$48,750,000, retail sales about \$11,250,000. The retail sales of two of our houses reach over \$1,000,000 each, annually, and four (including the two) about \$500,000 each. The wholesale trade, heretofore confined to Main street, now indicates a decided movement toward Washington avenue and Fifth street, and the four magnificent stores now all but completed on the latter thoroughfare, near St. Charles street, will be occupied this Fall by Main street houses, while other buildings in the same locality, for wholesale purposes, are in contemplation. The yearly increase in the dry goods trade of St. Louis cannot be less than 30 per cent.

THE GROCERY TRADE.

The grocery trade of St. Louis is fully representative of the best business enterprise and the soundest commercial principles. Our merchants import largely from all quarters, availing themselves of the fullest range of the trade.

The following table gives a general glance at this important department of trade, during the past year.

GROCERIES.

MONTHLY RECEIPTS AND EXPORTS OF MOLASSES, COFFEE AND RICE FOR 1870

MOLASSES.						COFFEE.		RICE.				
RECEIPTS.				EXPORTS.			RECTS.	EXPT.	RECEIPTS.		EXPT.	
Months.	Bbbs.	Half bbls.	Kegs.	Bbbs.	Half bbls.	Kegs.	Bags.	Bags.	Sks.	Bbbs.	Pkgs.	
January	1,164	34	4	1,590	1,037	1,578	14,444	10,857	116	382	335	
February.....	4,898	261	62	2,336	1,639	2,048	9,059	11,095	49	423	1,028	
March.....	2,452	224	444	4,215	2,767	4,544	13,861	18,134	65	252	1,754	
April.....	1,943	25	1,276	3,528	1,681	4,850	16,600	15,870	484	374	1,483	
May.....	1,319	39	1,383	3,743	2,561	4,065	16,505	16,405	538	176	2,002	
June.....	529	1	28	2,757	1,888	2,940	12,711	13,981	617	131	1,715	
July.....	459	.....	688	2,642	1,892	2,499	9,612	12,646	215	312	1,378
August.....	1,099	.....	138	2,385	1,138	1,796	25,550	12,580	181	71	1,155
September.....	580	41	704	1,984	1,682	1,986	13,112	12,904	367	69	940	
October.....	676	.....	300	2,146	1,321	1,793	17,392	12,672	175	543	1,020
November.....	1,091	11	111	3,148	1,435	1,559	11,377	11,022	103	272	1,066	
December.....	922	19	100	2,185	1,156	1,546	8,826	11,474	152	553	772	
Total.....	1871	17,132	635	5,238	32,659	20,197	31,204	189,658	159,730	3,062	3,558	15,148
".....	1870	13,819	693	5,221	21,754	12,275	21,361	113,950	112,621	1,298	5,150	10,971
".....	1869	26,468	1,991	5,053	21,040	9,634	20,365	135,491	107,843	4,308	5,287	10,804
".....	1868	15,377	2,382	4,189	15,338	9,047	17,596	92,639	91,615	5,284	3,736	9,781
".....	1867	8,565	473	996	10,925	7,728	14,763	98,617	80,344	4,883	1,181	7,560
".....	1866	6,100	1,033	761	9,582	4,981	11,132	90,367	65,985	3,977	5,344
".....	1865	10,090	998	1,461	9,379	2,130	11,095	60,106	56,963	2,035

MONTHLY RECEIPTS AND EXPORTS OF SUGAR FOR 1871.

RECEIPTS.					EXPORTS.			
MONTHS.	HHDs.	BBLs.	BOXES.	BAGS.	HHDs.	BBLs.	BAGS.	
January.....	2,034	579	.....	.....	622	6,623	222
February.....	5,444	563	1,880	.....	819	7,536	15
March.....	6,927	1,602	7,829	.....	1,818	14,713	1,174
April.....	4,816	1,378	1,904	.....	1,264	11,893	820
May.....	3,673	1,134	4,167	.....	1,525	12,808	1,199
June.....	3,174	1,591	4,004	.....	664	16,102	2,144
July.....	2,123	1,732	847	.....	515	13,358	2,154
August.....	2,714	4,257	6,548	12	423	13,000	1,700	
September.....	1,738	4,631	2,614	35	443	13,100	604	
October.....	818	5,760	5,944	.....	260	9,452	5
November.....	881	6,455	2,313	.....	489	9,284	6
December.....	2,190	1,301	.....	.....	545	7,606	3
Total.....	1871	35,532	31,353	38,050	47	9,390	133,675	10,055
“.....	1870	23,289	10,597	56,255	114	5,160	98,243	10,870
“.....	1869	24,742	24,529	61,041	409	4,648	96,990	21,125
“.....	1868	16,628	15,973	44,196	516	3,374	80,268	22,735
“.....	1867	19,730	19,819	29,924	2,142	2,855	67,670	24,849
“.....	1866	14,686	12,119	43,697	1,649	1,985	57,548	17,960
“.....	1865	17,889	8,189	29,410	1,852	53,069

To illustrate the extent of the business, we may say that there are in St. Louis, seven firms doing a business of about \$1,000,000 each annually, and two or three whose operations reach about \$2,000,000 each per annum. The wholesale trade of the present year will be fully twenty-five per cent. over that of last year, and total annual wholesale trade for the past year reached \$34,350,000, and the retail sales about \$11,250,000, making the grand total annual sales \$45,600,000. The wholesale merchants are now importing more heavily than during any previous year, and the expansion of the business corresponds with that observable in the other departments of our commerce.

It is impossible to speak of the grocery trade of St. Louis without adverting particularly to the Belcher Sugar Refinery and establishment, which, in magnitude of operations and mercantile influence, is among the first of the kind in the country. The business which resulted in the establishment of the refinery was commenced in 1840, and by the persistent energy of Messrs. W. H. and Charles Belcher was steadily increased, and has now attained a colossal character reflecting credit upon our city. The buildings of the refinery cover nearly four squares. We have not space to enter into any detailed description of this establishment, but the extent of the business of the company is fairly indicated by the following figures:

Sales of refined sugar by Belcher's Sugar Refining Company in the home market:

Years.	Pounds.	Years.	Pounds.
1856.....	13,700,000	1865.....	13,100,000
1857.....	11,800,000	1866.....	17,300,000
1858.....	12,900,000	1867.....	17,300,000
1859.....	18,800,000	1868.....	18,300,000
1860.....	15,000,000	1869.....	22,400,000
1861.....	9,500,000	1870.....	25,500,000
1862.....	7,400,000	1871.....	29,100,000
1863.....	7,900,000	1872.....	32,800,000
1864.....	7,900,000		

The amount of duty paid to the government by the refinery is shown as follows:

Years.	Amounts.	Years.	Amounts.
1865.....	\$378,015	1868.....	\$637,371
1866.....	463,727	1869.....	754,649
1867.....	651,924	1870.....	801,140

The refined sugars and syrups made by this refinery, find a sale here and in the leading towns and districts west of St. Louis. Formerly it sold many goods to Chicago and Milwaukee and the upper Mississippi towns, but that trade has all gone to New York and other Atlantic cities. The growth of St. Louis and the country west of it, however, compensates for this loss.

The following are the present directors and officers of the company:

Directors—R. J. Lackland, D. A. January, James Smith, Carlos S. Greeley, Joseph C. Cabot, Geo. S. Drake, Chas. Belcher.

Officers—Chas. Belcher, president; Ed. Y. Ware, secretary.

HARDWARE.

The hardware trade was largely increased in volume during 1869, and suf-

ferred no falling off in 1870. The sales for 1870-2, show this department of trade to have a healthy growth, while there are satisfactory evidences of a constant expansion. The value of production during the past year was nearly \$3,125,000, and the amount invested in manufacture is about \$1,000,000. The business of each of our more important houses shows a material increase over that of the preceding year. The annual sales of seven wholesales firms, for 1871, are represented respectively by the following figures: \$600,000, \$150,000, \$234,000, \$100,000, \$135,000, \$400,000, \$550,000. In a city destined to become famous in the working of metals, the hardware trade must necessarily assume a proportionate magnitude and importance to the growth of the city itself, and it is not unreasonable to assume that, at no distant day, St. Louis will be the Sheffield of America.

LUMBER.

The receipts of all kinds of lumber during the year 1870 were as follows:

	Feet.		Feet.
White Pine.....	199,569,000	Cypress.....	70,000
Yellow Pine.....	30,350,000	Shingles.....	140,434,000
Poplar.....	3,775,000	Lath.....	27,514,000
Walnut.....	3,679,000	Pickets.....	1,210,000
Oak.....	2,886,000	Logs.....	29,400,000
Ash.....	457,000		

The total number of feet of all kinds of lumber and logs on hand in St. Louis, January 1, 1871, was 119,882,265. The sales in 1870 exceeded those of 1869, 53,110,000 feet of lumber, and the aggregate during the season is 229,110,000, demonstrating an increase in the trade of 30 per cent. Alluding to the lumber resources of Missouri, Mr. Joseph Bogy, in a statement respecting the trade, published in the annual report of the Union Merchants' Exchange, speaks as follows: "This business in our State has not received the attention it deserves. The fine timber regions of the Gasconade, Washington, Madison, Iron, and other sections, have not been developed to any extent beyond their home demand and that of our own market. While a large business should be done, and capital attracted to these regions, we hope to see, by the extension of new railroads, which will soon penetrate those sections of our State where timber is abundant, these causes obviated. It is a well-known fact that the pine regions of the North are fast giving out, and that we have reached that period where the demand for lumber is increasing and supply diminishing, and, sooner or later, the yellow pine must take its place as a substitute for most of the white pine now used.

The following figures show the receipts and shipments of lumber, logs, shingles, etc., during the months named of the present year:

RECEIPTS.

JANUARY—White Pine.....	544,000
Shingles.....	3,158,000
Yellow Pine Flooring, 435,000; Dimension, 77,000.....	412,000
Poplar, 150,000; Oak, 200,000; Walnut, 145,000.....	495,000
Red Cedar, 108,000; Ash, 12,000; Hickory, 9,000.....	129,000

FEBRUARY —White Pine.....	2,016,000
Shingles.....	4,665,000
Yellow Pine Flooring and Dimension.....	641,000
Poplar, 358,000; Oak, 293,000; Walnut, 337,000.....	988,000
Cedar, 185,000; Ash, 20,000; Hickory, 16,000.....	221,000
Sycamore, 10,000; Maple, 5,000.....	15,000
Walnut Logs, 100,000; Oak Logs, 100,000.....	200,000
MARCH —White Pine.....	6,231,000
Shingles.....	3,919,000
Lath.....	3,930,000
Poplar, 764,000; Oak, 515,000; Walnut, 880,000.....	1,659,000
Yellow Pine Flooring and Dimension.....	1,147,000
Red Cedar, 784,000; Ash, 47,000.....	831,000
Oak Logs, 216,000; Walnut Logs, 350,000; Ash Logs, 50,000.....	616,000
All other kinds of Lumber.....	7,000
Fence Posts.....	12,000
APRIL —White Pine.....	8,978,000
Yellow Pine.....	1,573,000
Shingles.....	9,558,000
Lath.....	1,601,000
Pickets.....	20,000
Oak, 272,750; Walnut, 269,600; Poplar, 656,000.....	1,198,356
Red Cedar, 165,000; Ash, 66,352.....	831,352
Other Lumber.....	20,000
Oak Logs, 389,000; Walnut Logs, 245,000; Cottonwood Logs, 247,000.....	881,000
MAY —Total Logs and Lumber.....	42,667,300
Shingles.....	7,690,000
Lath.....	3,000,000
JUNE —Total Logs and Lumber.....	30,575,000
Shingles.....	9,075,000
Lath.....	3,211,000
Total Lumber and Logs received, in feet.....	101,640,402
“ Shingles “.....	43,065,600
“ Lath “.....	12,342,000
“ Fence Posts “.....	12,000

The shipments were as follows:

JANUARY —White Pine and other Lumber.....	3,163,000
Shingles.....	3,270,000
Lath.....	1,100,000
FEBRUARY —White Pine and other Lumber.....	3,566,000
Shingles.....	3,575,000
Lath.....	1,620,000
MARCH —Pine and other Lumber.....	7,904,000
Shingles.....	9,608,000
Lath.....	5,250,000
APRIL —All kinds Lumber.....	5,892,000
Shingles.....	10,616,000
Lath.....	3,798,000
MAY —Lumber of all kinds.....	9,134,000
Shingles.....	12,000
Lath.....	8,163,000
JUNE —Lumber of all kinds.....	10,661,000
Shingles.....	11,858,000
Lath.....	6,661,000

WOODEN WARE.

Of the manufacture of wooden ware, Mr. Samuel Cupples, of St. Louis, stands at the head. Mr. Cupples came from the East, when not advanced in years, and with that keen foresight, that has distinguished every man, who has impressed himself, by business and talent upon St. Louis, he started business in 1851, with a capital of \$20,000, and now on account of the advantage in locality, and the superior management of the business, Mr. Cupples stands at the head of the largest establishment of the kind in the world. The special character of his trade is oak and ash cooperage, and the magnitude of it may be inferred from the following facts: The annual business of this establishment is \$1,500,000. Of the materials consumed annually in the manufacturing of wares and things, there are 5,000 cords of white oak, 225 tons of hoop and nail iron, out of these are made 78,000 well-buckets and 85,000, five and ten gallon kegs.

For the manufacturing of paper bags, one and a half million pounds of manilla paper is used annually, and out of which 90,000,000 bags are made, also one-half a million pounds of a superior article is used for wrappings, 20,000,000 pounds of manilla cordage is used annually, and 3,000,000 pounds of wrapping paper, for groceries. 250 hands are employed, four-fifths of which are heads of families.

This immense establishment does business from the Wabash to San Francisco, and from St. Paul to Galveston. A branch of business, so great, cannot fail to contribute largely to the growth and importance of St. Louis, and Mr. Cupples bears testimony, that one of the most important reasons for his great success, is in the locality where he has conducted his business. He says that St. Louis is the best point, in the United States, for manufacturing industry. It has the advantage of the cheapest freights for collecting materials and distributing goods, and what is true of Mr. Cupples' business, is also true of more than one dozen of the leading branches of the manufacturing industry of the country. A truth like this is of incalculable value to the future growth of St. Louis.

JACOB TAMM & CO.

The St. Louis wooden ware works, for the manufacturing of ware out of pine lumber, is an extensive establishment. The annual business amounts to \$250,000. The class of wares consist of poles, tubs and churns. The annual consumption of lumber is 4,000,000. To run the business requires 150 hands.

PATENT MEDICINE.

One of the leading business interests of St. Louis, is that of Dr. J. H. McLean's patent medicine establishment, which, in point of trade, is second to no other in the United States. But a few years ago, the Doctor began with scarcely any capital. His business is now conducted on a capital stock of \$150,000. His annual sales amount to \$400,000. He manufactures five different medicines, as follows:—Dr. J. H. McLean's Strengthening Cordial, Dr. J. H. McLean's Volcanic Oil Liniment, Dr. J. H. McLean's Universal Pills, Dr. J. H. McLean's Candy Vermifuge, Dr. J. H. McLean's Chinoidine Sugar Pills. To conduct this business requires 8,000,000 almanacs printed annually, in different languages, 4,000,000 little pamphlets and 8,000 reams of paper. It requires fifteen traveling agents, and 35 hands in the medical establishment.

TOBACCO.

A general glance at the condition of the trade in this important article is appended in the following tables:

REVIEW OF ST. LOUIS TOBACCO MARKET.

MONTHLY RECEIPTS OF HHDS. TOBACCO FOR PAST FIVE YEARS.

YEAR.	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
1867.....	35	82	427	1,360	1,719	3,342	3,712	3,599	2,734	887	437	250	18,584
1868.....	65	148	857	1,419	1,966	3,170	1,310	1,489	1,156	351	229	76	12,266
1869.....	123	349	641	911	1,420	2,642	1,307	1,181	717	423	220	194	10,128
1870.....	146	394	625	1,226	1,714	2,815	1,548	1,449	640	323	165	148	11,193
1871.....	126	634	1,068	1,238	1,524	2,678	3,568	3,208	1,349	488	427	225	16,533

1871—Boxes and Packages of Leaf Tobacco..... 1,376

MONTHLY EXPORTS OF HHDS. TOBACCO FOR PAST FIVE YEARS.

YEAR.	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
1867.....	90	182	626	636	983	2,548	3,183	2,469	2,512	1,650	1,080	309	16,278
1868.....	72	122	418	601	1,381	1,399	889	1,125	1,413	703	626	147	8,894
1869.....	153	99	238	683	1,005	1,765	1,130	850	1,197	637	233	216	8,214
1870.....	69	129	233	692	915	1,513	1,250	800	643	766	413	221	7,642
1871.....	314	152	733	598	707	1,503	2,743	2,199	1,380	586	217	102	11,264

Total sales at public auction, including reviews.....	7,261	hhds.	
Total rejections sold privately or shipped elsewhere.....	3,147	“	
Stock on hand January 1st, 1870.....	403	hhds.	10,408 hhds.
Receipts during 1870.....	11,193	“	
Exports during 1870, direct.....	1,593	hhds.	11,596 hhds.
“ “ “ from warehouses.....	4,230	“	
“ “ “ to adjacent manufacturing establishments.....	1,819	“	
City consumption.....	3,153	“	
			10,795 hhds.
Stock on hand January 1st, 1871.....			801 hhds

WOOL, HIDES, PELTRIES AND FURS.

The table appended gives a compact view of trade operations in the articles above named, during the year 1870 and the five years preceding :

YEAR.	WOOL.		HIDES.				PELTRIES.		FURS.	
	REC'TS.	EXP'TS.	RECEIPTS.		EXPORTS.		REC'TS.	EXP'TS.	REC'TS.	EXP'TS.
	Pkgs.	Bales.	Pcs.	Bdls.	Pcs.	Bdls.	Bdls.	Bdls.	Pkgs.	Pkgs.
1870.....	13,486	17,882	120,739	37,425	55,896	132,321	12,903	4,238	2,923	3,612
1869.....	14,905	20,738	103,906	17,170	66,173	81,048	11,584	4,279	4,051	1,897
1868.....	17,756	18,530	150,245	16,362	81,546	47,083	11,278	4,042	6,536	4,992
1867.....	12,040	11,928	146,421	11,910	85,291	45,113	10,278	3,807	6,093	2,820
1866.....	9,205	8,557	169,470	6,981	165,580	22,481	.....	.....	.....	.....
1865.....	10,599	9,394	187,591	7,310	267,119	.....	.....	.....	.....	.....

RECEIPTS OF HIGHWINES FOR SIXTEEN YEARS.

Year.	Barrels.	Year.	Barrels.	Year.	Barrels.
1871.....	21,505	1866.....	58,157	1861.....	72,790
1870.....	61,754	1865.....	38,014	1860.....	102,356
1869.....	52,103	1864.....	50,407	1859.....	100,092
1868.....	23,419	1863.....	54,862	1858.....	122,295
1867.....	38,455	1862.....	70,374	1857.....	125,547
				1856.....	95,821

LEATHER MANUFACTURES.

In this, as in various other manufacturing branches of this city, to fully delineate its character and magnitude it would be necessary to treat it far more in detail than is possible in this condensed commercial *resume*, and we can only present a few significant facts. From reliable statistics it appears that there is over \$5,000,000 invested in the business, and that the annual sales range between \$15,000,000 and \$20,000,000, including, of course, all branches of the business. Indeed, if we include saddlery and the other departments which may correctly be comprised in the leather trade, the capital invested will reach nearly \$8,000,000. There is no market in the United States where a greater variety and better articles are placed at the disposal of buyers.

COTTON.

St. Louis is not at present as active or extensive a cotton market as it should be, but the obstructions to the development of the trade are transitory in character and the prospects for the future are decidedly encouraging. The establishment of the proper means of compressing, increase of storage facilities, and the perfecting of the railroad system south into the cotton-producing territory removed from river transportation, will unquestionably expand operations at this point. The cotton consumed by our manufacturers during the past year was :

By St. Louis Cotton Factory.....	3,300 bales.
By Brown, Marriott & Co.....	900 "
By Wm. B. Edgar.....	200 "
By Brooks Bolton.....	95 "
Total.....	4,495 bales.

RECEIPTS AND STOCK OF COTTON FOR NINE YEARS.

	1871.	1870.	1869.	1868.	1867.	1866.	1865.	1864.	1863.	1862..
Receipts.....	41,572	11,372	19,022	19,160	40,572	22,167	89,675	33,324	26,920	39,574
Stock, Jan. 1st.....	285	140	40	1,450	2,917	9,525	322	.....	.....	.....
Total.....	41,857	11,472	19,062	20,610	43,489	31,692	90,007	33,324	26,920	39,534

EXPORTS AND CONSUMPTION OF COTTON FOR SEVEN YEARS.

	1871.	1870.	1869.	1868.	1867.	1866.	1865.
Exports.....	35,782	6,692	15,419	16,727	39,550	25,227	73,113.
City Consumption....	5,375	4,495	4,407	3,843	2,489	1,710	1,500
In Store Dec. 31st.....	700	285	100	40	1,450	2,917	9,525
Unaccounted for.....	.....	.....	.....	.....	.....	1,838	5,869
Total.....	41,857	11,472	19,926	20,610	43,489	319,62	90,007

The amount of bagging manufactured during the year 1870 was 3,377,845 yards.

Receipts and Exports of Flax Tow for Two Years.

RECEIPTS.			EXPORTS.		
Articles.	1870.	1869.	Articles.	1870.	1869.
Flax tow, bales.....	16,399	9,035	Flax tow, bales.....	1,635	73

Receipts and Exports of Rope and Cordage.

RECEIPTS.				EXPORTS.		
Articles.	1870.	1869.	1868.	Articles.	1870.	1869.
Rope, coils.....	93	50	636	Rope and Cordage, coils.....	40,001	41,471
Cordage.....	19,093	24,107	14,466			

Receipts of Hemp and Tow for Twenty Years.

Year.	Bales.	Year.	Bales.	Year.	Bales.	Year.	Bales.
1870.....	12,716	1865.....	40,846	1860.....	68,673	1855.....	91,326
1869.....	24,438	1864.....	64,078	1859.....	68,796	1854.....	69,649
1868.....	25,609	1863.....	56,337	1858.....	81,423	1853.....	62,692
1867.....	30,750	1862.....	78,317	1857.....	80,094	1852.....	48,819
1866.....	18,759	1861.....	25,568	1856.....	53,737	1851.....	65,471

MANUFACTURE OF COTTON AND WOOLEN GOODS.

A few facts in relation to the relative advantages of St. Louis, for the manufacture of staple cotton and woolen goods will be of interest. It is situated in the center of the great and inexhaustible coal region of the West, and our proximity to the cotton and woolen belt, and the cheap transit of the Mississippi river and railways, insures an average price of two cents per pound less for middling cotton than at New York or Boston, thus enabling the manufacturer to produce his goods in St. Louis at less than the Eastern mills can produce them, and at an additional saving of a half cent per yard for the transportation of the manufactured product. Through the rare productiveness of our soil, we can prosperously support a larger population to the square mile than any other country in the world. Our destiny, therefore, as a manufacturing center is a matter of fact, and not a question of argument. We are to be the center of a manufacturing district in textile fabrics, which is to supply the wants of the Mississippi Valley, the Southwest, the Northwest and the Pacific Slope.

In the manufacture of staple goods, where the raw material and fuel are the leading items in the cost, a very small difference in the cost of production turns the scale for or against any locality—thus, if the raw material can be

converted into manufactured goods in one week at a profit of one per cent., it amounts to the enormous profit of fifty-two per cent. per annum.

There are already established a large number of cotton mills in the Mississippi Valley, and three-fourths of all the sheetings sold in this market during the last year have been the production of these mills. The increase of woolen mills during the last five years, in the section of which St. Louis is the commercial center, is beyond parallel in the history of this country. There have been mistakes made in the excessive production of some kinds of goods, but the fact has been proven that we have the ability to produce such goods at less cost than Eastern mills. For the future the wool will be grown here and west of us, and can only reach the Atlantic seaboard under the heavy tax of double first-class freight for wool in the grease and dirt, equal to four or five cents per pound upon scoured wools. With these facts in view, it must be apparent that it is only a question of time when the great manufacturing interest of the United States will be in the Mississippi Valley, and St. Louis its center.

THE ST. LOUIS PUBLIC SCHOOLS.

The facilities for Public education in St. Louis are of three kinds: (1) the public schools free to all. (2) The parochial or denominational private schools, sustained chiefly by the Catholic and German protestant, evangelical churches. (3) Private schools, established through individual or corporate enterprise. The growth of all these systems and particularly that of the free schools, may be seen, by comparing the statistics at the close of each decade for the past forty years.

YEARS.	1841.	1851.	1861.	1871.
Population of the City.....	20,826	83,439	163,783	325,000
Enrollment in Public Schools.....	350	2,427	13,380	31,087
Enrollment in Private Schools.....	700	2,300	7,800	17,500
Per cent. of entire population at School.....	5	6	13	15

During the past two years 1871 and 1872, the Catholic church has built a very large number of beautiful and commodious school houses, locating them in different parts of the city.

The increase in the number of scholars enrolled from year to year in the public schools, is upwards of 3,000; and the Board of Public Schools builds annually, three or four first-class school houses, in order to accommodate the new comers.

As far back as 1812, Congress passed an act donating certain vacant lands in the territory of Missouri, situated in or adjoining St. Louis, St. Charles and other settlements, for the support of schools in those towns and villages. In 1824 and 1831, acts were passed amending and supplementing the provisions of 1812. The first charter creating a school Board in the city of St. Louis, was passed in 1833. For the previous sixteen years, a Board had existed for the control of the lands given by the general government for school purposes; this Board was a close corporation. The new corporation by its charter constituted the whole white population of the city; its powers were vested in a

Board of Directors, composed of "two members from each ward, elected by the qualified voters thereof, and to hold their office for the term of three years, and until their successors were duly elected and qualified." At the time of the formation of this Board, the steamboat interest had just begun to give a new impulse to the settlement of this city, and the population doubled in four years afterwards. Proceeding to rent the real estate then in their possession, in a few years enough revenue was saved from rents to erect two brick buildings, costing about \$3,000 each, and accommodating in the aggregate 350 pupils. The first of them was opened in April 1838. It was situated on the corner of Fourth and Spruce streets.

In 1839 a lot was obtained for the "Benton school," and in January 1842 the building now standing on the corner of Sixth and St. Charles streets, was opened for pupils. The cost of what was then so large a building, (upwards of \$10,000) impoverished the Board, and a reaction took place. A tuition fee of \$10 per annum, greatly crippled the growth of the schools until 1847. In 1846, three more school houses were built and occupied, making in all six cheap school houses, established before the first city tax was levied for common schools. A tax of one mill on the dollar, of taxable property, was voted by a majority of five to one, in June, 1849. The revenue from real estate leases at that time amounted to \$14,000 per annum, and the population was 70,000 and doubling once in six years. The first "mill tax" was collected in 1850, and yielded \$18,432.

Since that period the growth of the schools has been very rapid. In 1861, the schools suffered a serious drawback through the war. A tuition fee was charged and 60 per cent. of the attendance on the schools was cut off at once.

The school fund arising from the lands given by Congress, amounts to about \$2,000,000. Adding to this the value of property in use for school purposes, we have a total of \$3,500,000 permanent investment for the city schools, which are under the management of the Board. The Board has now the chartered power, to levy a tax not exceeding one half of one per cent. per annum, for school purposes. A fine education is offered to all the youth of the city, in all the branches required, from the lowest primary grades up to the finished education for the man of business.

The schools number in all over fifty, including a central High school and four Branch High schools, one Normal school for the training of teachers, six schools for colored children and forty three district schools. In most of the schools, German is taught by competent teachers, so that pupils of German parentage may attend the public schools, without the danger of losing their native tongue, while they acquire the English.

A flourishing public school library, containing upwards of twenty-eight thousand volumes, is a novel feature in the system, but is a great practical success. Not merely the "how to study," but the "what to study" is to be taught in this school system.

The result proves, that pupils join the library while in the schools, and continue their membership with it after they leave; thus lengthening their school life indefinitely.

A system of evening schools commences its sessions the first of October, and lasts until spring, giving instruction four evenings each week, to all who are prevented from attending the day schools, by reason of employment in some useful branch of industry. Over 4,000 youth and adults of both sexes, were in attendance on these schools in the winter session of 1871-72. Free memberships in the Public School Library, were given to the regular and industrious pupils.

These details concerning the facilities for education, are of vital importance to those who propose to immigrate to this city. Every parent feels it his duty in selecting his home, to consider as paramount the welfare of his children. The wages that he can earn are to be expended for food, clothing, shelter and culture for his family. The real gain from year to year that he can count from his care and anxiety and his money, all invested in his children, must consist in their mental and moral improvement. At an expense of \$200 to \$500 per year apiece, for the necessities of life, it must need seem a great matter, that this be utilized in the only possible way, to-wit: in intellectual culture. In no way can children be profitably employed, except in educating themselves for after life.

A special object to be attained in a public school system, is the removal of class distinctions. Nowhere can this process go on so well, as in the school. Homogeneity of language, manners and customs, becomes the necessary result of a good system. A republic demands this. One class does not exist for the benefit of another; but all for each and each for all, is the democratic principle.

CHURCHES.

As in education, so in the advantages for religious culture, St. Louis is well provided.

The church edifices in reference to the denominational phases of religion, number of, as follows:

Catholic 26, Lutheran 18, Methodist 16, Baptist 13, Presbyterian 13, Episcopal 9, Congregational 4, Hebrew 3, Christian 3, Unitarian 2, Swedenborgian 2. The Mormons or Latter day saints, have two church organizations, but no edifice. There is also one organization of Spiritualists, and 103 Sunday schools, in the city; Steps are also taken to build a new church for Dr. Berkley, to be called St. Peters church.

LIBRARIES.

St. Louis is quite well supplied for a western city, with public libraries, as the facts show:

Mercantile Library.....	40,300	Volumes.
St. Louis University Library.....	24,000	"
Polytechnic Library.....	30,000	"
Academy of Science.....	3,000	"
Law Library, Court House.....	7,100	"
Law, Polytechnic.....	900	"
Law, Washington University.....	1,000	"
Washington University.....	5,500	"
Circulating Library.....	27,000	"
Sabbath Schools.....	25,000	"
Other Law Libraries.....	15,000	"

THE PRESS OF ST. LOUIS.

In presenting the present material growth of St. Louis, and the public interests, that go to make up its greatness, the press cannot be omitted, as it necessarily forms an important part, of the representative growth of the city, and reflects to a great degree, the mental and moral progress of its people. The order and character of the press of St. Louis, is therefore presented as follows:

THE MISSOURI REPUBLICAN,

ISSUED, DAILY, TRI-WEEKLY AND WEEKLY.

The Missouri Republican is the oldest newspaper published in St. Louis, and the representative journal of the city and state, furnishing the best illustration of the spirit of progress which has given her press its high position. On the 12th of July, 1808, the first number of the Republican, and the first newspaper published in that section of the country now known as the State of Missouri, was issued in St. Louis. It was a diminutive sheet, measuring only twelve by fourteen inches, but was as well proportioned to the business of the town in that period, as its mammoth successor is to-day. Not quite four years had elapsed, since Spain had ceded the territory to the United States, and St. Louis was still nothing but an insignificant trading point containing about two hundred houses, built of hewn logs and rough stones, with little more than one thousand inhabitants. From that date to this, the Republican has been a faithful mirror of the advancement made by the city and the state, and the period of its being embraces all that is interesting in their growth. In fact, to write its history would be but to write the history of the Mississippi Valley and the Great West. When first issued the paper was known as the Missouri Gazette, but in December 1809, the title was changed to Louisiana Gazette, and in July 1818, the old name was again assumed, but gave place in 1822, to that of Missouri Republican, by which it has been known ever since. At the time the last change in its name was made, the Republican had, by two enlargements, attained the *prodigious* size of twenty by twenty-six inches. Until April 1833, it was published as a weekly paper, but then a semi-weekly edition was started, and in September 30th, 1836, the first issue of the Daily was printed.

Just as the history of the Republican, is a complete history of the territory in which it is published, so also in almost equal degree is it the history of the great art of printing. The press on which it was first worked, was a primitive machine of western manufacture, in fact, the pioneer press of the west. It was a rude concern, of just the same kind as those used in the days of Franklin. The Republican was quick to avail itself of power presses after their invention, and by May 1849, had grown in size to twenty-eight by forty-eight

inches, and possessed a large establishment fitted out with the best machinery to be had, when the great fire that month, which nearly destroyed the city, wiped the whole building and its contents out of existence in a night. But a single day's intermission occurred in the publication of the paper, and new machinery was promptly obtained. Prosperity continued, and by 1853, the paper had attained the gigantic proportions of thirty-three by fifty-six inches, making it, with two exceptions, the largest paper in America. The Republican was then printed on a double-cylinder, and in March, 1859, by one of Hoe's rotary four-cylinder printing machines. To this was added, in 1764, an eight-cylinder Hoe.

In May 1870, the Republican was again visited by fire, and the whole establishment was destroyed. But one day's issue was missed, however, and the proprietors with characteristic enterprise constructed in ten days, on the ruins of the burned building, a new structure, and on the seventh day after the fire the paper was restored to its former size. A new and elegant building was shortly after commenced, on Third and Chestnut streets, which it was intended should surpass any similar edifice in the country. This intention is more than realized by the magnificent iron front, fire-proof building in which the Republican is now housed. In beauty and elegance, and the perfection of all its appointments, it is equaled by no other newspaper establishment in the world. It is five stories in height and substantially as well as elegantly finished, and contains the most spacious and handsome composition room to be found in the country. Its editorial and counting rooms, are also in keeping with the general elegance of the building. It is, however, in the press rooms, that the vast advance made by the Republican, is most noticeable. In this department it stands in the lead of all the papers of the land, and is a long step ahead of even the great dailies of New York, and the other eastern cities. There are in its press rooms, a Hoe four-cylinder press, a Bullock press and a Walter press. This latter is the last great improvement made in printing machinery, and was invented and manufactured for the use of the London Times. It is the fastest press in existence, and presents the greatest economy of labor and expense with the highest maximum of speed. The machine has been in use but half a dozen years and only nine in all have been built, six of which are in the London Times office, two in the Edinburgh Scotsman office, and one in the Republican office. The Bullock is a similar machine in general character but an American patent and manufactured in Philadelphia. Altogether the Republican has press facilities to print about 37,000 perfected copies per hour, a fair indication of the extent of its circulation. On the 27th of October, 1872, the Republican moved to its new quarters, and with the issue of that day the form was changed from a folio to a quarto.

With the introduction of these improved printing facilities, the Republican once more changed its form, appearing in the quarto shape, and is now one of the handsomest sheets published. In importance and general character it ranks with the great dailies of the country, by none of whom it is surpassed, and is popularly known as the great representative journal of the West. Its tone is high and dignified, and few newspapers, anywhere, enjoy such a widespread influence. In Missouri its power is undisputed and unrivaled, and to

only less extent, it has not unfrequently been felt throughout every state and territory of the Union.

The politics of the Republican were originally those of the National Republicans. It supported Adams and Clay, and, with the friends of those statesmen, hailed the organization in 1834 of the American Whig party, and was one of the ablest champions of Whig principles in the country. It, however, resisted the effort to make the Whig organization an engine of oppression, towards foreigners and Catholics, and when the American Know-Nothing party arose, the Republican refused to follow a large majority of its old political associates into the new party, but made vigorous and effective war upon its professions and claims. In 1856, the Republican threw its vast influence in behalf of James Buchanan, the Democratic candidate for President, and thenceforth it has upheld Democratic men and measures. It supported Douglas, in 1860, and carried Missouri for him in spite of the efforts of the Federal Administration, Senator Green and a large number of the most influential politicians of the State. During the war, while opposing the radical measures of Mr. Lincoln's Administration, it steadily opposed secession and the disruption of the Union. The Republican was the chief promoter of the celebrated "bolt" in the Republican party of Missouri, through which, and the passive attitude of the Democracy, B. Gratz Brown was elected Governor over the Radical Republican nominee. It was also an early advocate of the adoption of the "passive policy," by the National Democracy, in the presidential election of 1872, and opposed the nomination of a Democratic candidate, or any active part, by the Democracy, in the formation of the lines of the contest of that year. It claims entire independence of party control, but adheres to the conservative and constitutional principles of the Democracy.

The conspicuous ability with which the Republican has been conducted, throughout its lengthy existence, has gained for it an extensive circulation, and a national reputation, which renders unnecessary any eulogium upon its character as a great journal. Its identification with and devotion to the best interests of St. Louis and Missouri, have given it a circulation in the city and state, which has never been approached even by the most successful of its competitors; and at the same time have brought it an unusual large number of subscribers from other sections of the territory. This is a remarkable peculiarity of the Republican, and it is especially noticeable that there is no paper in the country, which has so large a number of readers outside of its own local territory. There is no point of consequence in the United States in which the Republican is not received, and in fact, scarcely any city of importance in the whole world, visited by any number of Americans to which copies are not sent. It is regularly mailed to such remote countries as Japan, China, the East Indies, Egypt, various points in Africa and Australia.

As would be imagined, from its extensive circulation, the working force of the Republican is excelled by that of very few newspapers. It employs regularly about twenty editors and reporters and maintains a large corps of special correspondents, having representatives at all the chief capitals and news centres of the world. The daily force in the composition room, numbers from

sixty to seventy men, and nearly an equal number are employed as carriers. There are altogether upon its pay roll, about two hundred and fifty men, the whole of this force being employed upon the newspaper, no job printing or other outside work being executed in the Republican establishment.

The concern is conducted by a stock company known as George Knapp and Company, of which George Knapp, John Knapp and Henry G. Paschall are directors.

THE ST. LOUIS DEMOCRAT.

ISSUED DAILY, TRI-WEEKLY AND WEEKLY.

The St. Louis Democrat (late the Missouri Democrat) has a more than ordinarily interesting history. It has not only repeated the experiences incident to the founding and permanent establishment of all the large journals of the country, with which it takes rank, but its early life is so closely identified with the rise and growth of the Republican party in Missouri, that the story of its career is the history of that party.

In 1845, the Free-soil doctrine which had, then for sometime, had a following in the free States began to be agitated in the slave State of Missouri. Its advocates were very naturally in the minority but they were sufficiently numerous, it was thought, to justify the publication of a journal devoted to their interest. The Barnburner was accordingly commenced by Mr. Wm. McKee, as a campaign paper. It continued through the campaign but eventually suspended publication. In 1850 Mr. McKee, in connection with Mr. Wm. Hill, began the publication of the Daily Sentinel in advocacy of the same doctrines, and with nearly the same subscription list that had supported the Barnburner. A few years afterwards these gentlemen purchased the Union—an opposition journal—and merging the two together, formed the Missouri Democrat. This was in 1852, and from that time, until the present, the Democrat has been steadily growing in circulation and influence. The defence of free-soil principles was continued by the publishers of the Sentinel and the Union, and the founding of the Democrat only gave a fresh vigor to their work. The Democrat characterized the first year of its existence by a brilliant support of the nomination of Thomas Benton, for Congress. After the election of President Buchanan, whom it supported, it gradually adopted the faith of the then new Republican party, and at the time of the election of Mr. Lincoln, was one of its staunchest defenders. During the trying, early war days, and throughout the whole of the contest, it was a fearless defender of the government and was so strong and earnest in its course, that on several occasions its office was threatened with violence, from which it was protected by guards of United States troops.

From the commencement of the enterprise, Hon. Francis P. Blair, Jr., held a proprietary interest in it, having at one time an equal share with Mr. McKee and Mr. Hill. In 1857, Mr. George W. Fishback, who, since 1854, had been the city and commercial editor of the Democrat, purchased a one-sixth interest, and Mr. Hill failing in health, retired. Hon. B. Gratz Brown, about

this time, also purchased an interest. This, however, he subsequently transferred to Mr. Fishback. Mr. Dan'l M. Houser, in 1865, purchased one-sixth interest, and Mr. Blair then retired, as did also Mr. Brown. From this time the publishing firm was known as McKee, Fishback & Co. In 1872, Mr. Fishback, becoming dissatisfied with the management, made a proposition to his associates, for their interest or sell them his. The matter was finally left to the courts by whom the establishment was sold, the bidding being restricted to the proprietors. The paper was purchased by Mr. Fishback at \$456,100, a sum which was considered large at the time, but which, considering the immense business the paper controls at present, is really very small. A stock company, with a capital of \$500,000, was immediately formed. Mr. Fishback retained a controlling number of the shares, and the remainder were divided between Mr. W. P. Fishback and Mr. Otto H. Hassleman, formerly of the Indianapolis Journal, Mr. R. Holmer, Mr. J. B. M. Cullagh and other gentlemen connected with the editorial and business departments of the paper.

The Democrat is a thirty-six column, folio paper, thirty-one and one-fourth by forty-five and a half inches in size, and issues daily, tri-weekly and weekly editions. Its circulation, which, its publishers claim, is not exceeded by that of any other journal of the West, extends over a vast area, both the daily and weekly going into thousands of towns and cities in all the States tributary to the Missouri and Mississippi rivers, while a large number of copies of both editions are taken abroad—principally in England and Germany—on account of its commercial news, to which special attention is given. Its publication facilities are of the amplest character, and its editorial and reportorial departments, which are ably and well managed, comprise a force of seventeen carefully selected caterers. Politically, the Democrat is Conservative Republican, being an unflinching advocate of sound Republican principles and an exponent of advanced thought and progressive politics. It is the chronicler of the current events at home and abroad which make up the world's history, and strives to fill, in all its departments, the poet's measure of

"A map of busy life,
Its fluctuations and its vast concerns."

The job-printing department of the paper, it is claimed, is the most extensive, west of New York. It is the agent for the American Bank-Note company, and specimens of its lithographing and engraving adorn the counters of nearly every banking institution in the Mississippi Valley. This establishment occupies the whole of a large four-story building on the corner of Fourth and Pine streets.

THE ST. LOUIS GLOBE.

The St. Louis Globe needs as little introduction to the great public, being as widely and as well known as the Republican, Democrat or the Times. Its proprietors, Messrs. McKee & D. M. Houser, built up the Missouri Democrat which sold for nearly half a million; and the ability thus solidly attested, with the experience so acquired, has made the Globe, in less than five months, a permanent institution of the Mississippi Valley.

The Globe is of first-class size, a fair quarto, especially admired for its typographical beauty, and claims to be unexcelled in the extent, variety or value of its news columns, or in the fullness and worth of any of its departments. Its first number was issued on the 18th of July, 1872, and by November, its editions had come up to seven, eight and nine thousand for the daily alone, and were steadily increasing in the dullest business season, while a leading rival was reducing its columns by four. The Globe is the only St. Louis daily, which furnishes its regular subscribers with seven issues, each entirely new, per week. It appears in a weekly and semi-weekly, as well as in a daily form, and is read in hotel, saloon and car, as well as in the reading rooms and in the homes of the people, from Maine to California.

The Globe's swift and unexpected success, is a new proof of the grand growth of St. Louis and the West in population, intelligence and wealth. It does not necessarily take from the thrift of any other journal which is conducted in a just and energetic manner.

Politically, the Globe reflects the convictions of its proprietors, which using their own strong language are, "that in the prevalence or overthrow of Republican principles is wrapped up the thrift and glory or the ruin and disgrace of the American people." They respect those who candidly hold opposite views, yet oppose the latter with all the energy they can command.

THE ST. LOUIS TIMES.

It may be said of the St. Louis Times, without boastfulness on the part of its publishers and without any departure from veracity, that its success as a newspaper, has had few, if any, parallels in this country; certainly none, when we consider the peculiar time and circumstances of its origin.

A little more than a year after the war, the gentlemen who conceived the enterprise, entered upon their work with small capital, in the face of many difficulties, and with rich and powerful competitors, jealous perhaps of innovations, and already long established in this field of journalism.

The first number of the new paper was issued on the 21st of July, 1866, the counting office of the company being in a small room scarcely larger than a printer's stand, at No. 317 1-2 Pine street, under DeBar's Opera House. Many and formidable were the embarrassments encountered, and many were the predictions that the project would soon fail for want of support; but the publishers, Messrs. D. A. Mahony, Stilson Hutchins and John Hodnett, all originally from Dubuque, Iowa, knew no such word as fail. They perceived that a vacancy existed at the time in our political journalism, and resolved to fill it. Through their persistent energy, the work was accomplished and the Times successfully established.

On the 1st of July, 1867, the office was removed to No. 206 North Third street, where it has since remained. On the 6th of December of the same year Mr. Mahony withdrew from the paper and returned to Iowa. In September, 1869, Maj. Henry Ewing of Nashville, Tennessee, purchased a third interest in the establishment, and on the 13th of July, 1872, Mr. Hutchins disposed of

his interest to Maj. Ewing. The Times is now published by a company of which Maj. Ewing is President and Mr. Hodnett, secretary ; and was never on a better or more promising business footing. It is published daily, weekly and tri-weekly, and besides a circulation in the city of St. Louis, comparing favorably with that of any of its contemporaries, has an outside subscription of many thousands, extending through Missouri and the surrounding States, and reaching far to the South and Southwest.

In every department it is carefully edited, and thus acquires the characteristics of a vigorous originality throughout. Its news summaries are complete, yet concise, embracing important intelligence from all parts of the world. Its correspondence, both at home and abroad, is elaborate, entertaining, and contributed only by writers of reliable judgment and sterling accomplishments. Its local pages are full, accurate and attractive, as well as instructive. Its commercial columns are under the supervision of competent and well-posted men, and furnish an authentic reflex of the current business events of the day.

It is, in short, a newspaper eminently suited to the times, as its name suggests, and is rapidly finding its way to every quarter of the country. A recognized exponent of Democratic principles, it is independent and fearless in their expression, and with all other subjects of public interest pursues the same straightforward policy : having the fixed purpose to become the best as it is the cheapest paper in the West.

WESTLICHE POST

Is a German, daily morning paper, with weekly edition. It is published every morning, except Sunday, which is supplied from the same office, with a large Sunday paper of sixteen pages, and called the Mississippi Blatter. The Post is an able paper, and republican in politics.

ANZEIGER DES WESTENS.

Is a German morning daily, with weekly and Sunday editions. It is democratic in politics, and edited with great ability.

MISSOURI STAATS ZEITUNG.

Is a German morning daily, with weekly edition, and Sontags blatt. It is published by a printing company, and is republican in politics.

EVENING DISPATCH.

The Evening Dispatch, is published every afternoon, except Sundays, and has a tri-weekly and weekly edition. It is democratic on politics.

JOURNAL OF COMMERCE.

The Journal of Commerce is published every afternoon except Sundays. It has a weekly edition, and is republican in politics.

INDUSTRIAL PRESS.

The Industrial Press of St. Louis, comprises the following publications: 1. Colman's Rural World, 2. Illustrated Journal of Agriculture, 3. Industrial Age, 4. Sower and Reaper.

RELIGIOUS PRESS.

The following list comprises the religious press of the city: 1. Central Baptist, 3. Christian Advocate, 4. Cumberland Presbyterian, 5. Herald des Glaubens, 6. Old School Presbyterian, 7. Western Watchman, 8. Childrens' Advocate, 9. Lutheraner, 10. American Protestant, 11. American Sunday School Worker, 12. Church News, 13. Communist, 14. Ford's Christian Repository, 15. Sehre und Wehre, 16. Manford's Magazine.

LITERARY PUBLICATIONS.

As the growth and size of St. Louis have for many years afforded a field for almost every variety of intellectual efforts, several attempts have been made, from time to time, by different aspiring parties, to establish literary journals and magazines designed to occupy a certain field of interest and thought. But most of them have been short-lived, because of a want, in a great measure, of capacity and means to publish and edit them; but in a still greater measure have such publications suffered for a want of a sufficiently appreciative and patronizing public to sustain them. The present number of literary publications in St. Louis are the following:

I. THE JOURNAL OF SPECULATIVE PHILOSOPHY.

This Journal, edited and published by Prof. Wm. T. Harris, is devoted especially to the discussions and interests of speculative philosophy. As a publication of ability and reputation, it stands alone in the country, occupying a field thus far peculiarly its own. It is a quarterly.

II. SOUTHERN REVIEW.

This is a large quarterly, edited by A. T. Bledsoe, LLD. It is a publication noted for its high character and ability, and, like the Journal of Speculative Philosophy, is creditable to the literature of the country.

III. THE INLAND MONTHLY MAGAZINE.

The Inland Monthly was first published in March, 1872, by Mrs. Charlotte Smith, a lady of great force of character and marked ability. As editress and proprietress, she has won for it a position and standing, unsurpassed by any magazine of equal age. The Inland aspires to occupy a field, not only literary, but is designed to stimulate and promote the ideas and interests of the Valley of the Mississippi. As such it deserves the highest consideration, as well as the most liberal patronage from the people of the West and South.

In the tone and style, of its original contributions, the Inland compares favorably with the first magazines of the country. It has the most talented corps of contributors of any magazine in the Valley of the Mississippi.

IV. THE WESTERN.

This is an educational monthly, edited and published by E. F. Hobart & Co. It is well printed, and owing to the special and important field it occupies, it is attaining high rank as an influential publication in the interests of western literature.

V. THE CENTRAL MAGAZINE.

This is a new monthly, recently started by Miss Mary Nolan, who is the editor and publisher. The character is somewhat miscellaneous, though essentially a Catholic publication, and while apparently not designed to occupy any especial field of discussion, it commends itself more to the family, than to the scholar and the thinker.

VI. THE ST. LOUIS MAGAZINE.

This is a new publication, issued by Julia M. Purinton, editor and proprietor. It is neither pretentious nor masculine in its character. But it is rather more feminine than either the Inland or Central. Music, ladies' fashions and poetry rule its dominant features.

VII. THE FREEMASON.

This publication is issued monthly, and is entirely devoted to the interests of masonry. Mr. G. F. Gouley is its editor and publisher, and claims it to be the largest masonic paper in the world.

MEDICAL AND SURGICAL JOURNAL.

The Medical and Surgical Journal is a professional publication, issued monthly and is edited and published by Wm. S. Edgar, M. D. and H. Z. Gill, M. D. It is a journal of good standing in the medical profession, which it is especially designed to subserve.

MEDICAL ARCHIVES.

This is a medical publication of character and ability. It is edited and published by J. C. Whitehill, M. D.

AT HOME.

This is a monthly just issued. It is got up with considerable mechanical taste, and its publishers, Conklin Bros., announce their purpose to make it a worthy literary journal.

THE LA SALLE.

Still later has a new monthly made its appearance, with the above title. What rank it is to take in the literary field, must be determined in the future.

THE TEMPERANCE MONTHLY.

The Temperance Monthly, is another new comer, in the future great city, and with a commendable air of confidence, its publisher offers it to the public on its merits.

MISCELLANEOUS PUBLICATIONS.

In addition to the foregoing statements, of the press of St. Louis, as far as it can well be classified, the following miscellaneous publications, belong to the sum total of the number. The Obscure Listy, Price Current, Railway Register, Sunday Morning, South St. Louis, Western Celt, a weekly paper devoted to the interests of the Irish people in America, and to all questions of general interest; Abend Schule, Fireside Visitor, Herald, Irving Union, American Journal of Education, Post Office Bulletin, Western Insurance Review.

THE PUBLIC PARKS.

The county of St. Louis is almost an Island, fronting to the east about thirty-two miles, on the "Father of Waters," with the turbid Missouri on the north and west, and the beautiful Mareme, with its bright and crystal waters, bounding it on the south. Its soil is highly productive and a large body of land, "Florissant Valley," occupying an elevated plateau, and watered by a small stream, is unsurpassed in fertility, and in rare pastoral and agricultural beauty, by any tract of equal extent on the continent. The charming diversity, which characterizes the surface, of St. Louis county, adorned as it is, by hill and dale, woodland and prairie, aided by the noblest and most majestic

rivers of the earth, which almost encompass, and the smaller streams which beautify and irrigate it, would indeed fit the entire county for a Grand National Park.

Mighty rivers are usually attended with vast areas of bottom lands, but by far the greatest portion of the river front, of St. Louis county, presents abrupt hills and rocky cliffs, giving extraordinary elevation to the general surface of its lands, and grand and imposing panoramic views from the surrounding rivers reaching the centre of the county, where an altitude is attained of about four hundred feet above the water level. A few miles below the city of St. Louis, which with its river front of more than thirteen miles, presenting from the Illinois shore, a fine panorama, begin the palisades, which extend with increasing height and importance to the Grand Tower, a lone crag whose base is washed on every side by the Mississippi.

The general contour of the surface of the county is pyramidal, its smaller streams, rising generally near its apex, and flowing to the different points of the compass, until they often reach, over the abrupt and rocky banks, the respective rivers. Notwithstanding the unusual beauty and fertility of its lands, it is sparsely inhabited, and the tourist, unacquainted with the fact, will often fancy that the forest-capped hill, with its gentle slopes of lawn-like prairie is embellished with some stately villa or magnificent and aristocratic mansion. The delusion is only dispelled to be again and again renewed with each changing prospect. Here a genial climate develops, in rare luxuriance, all indigenous trees, plants, vines and flowers, and in no other soil do exotics flourish and bloom in greater perfection.

With such surroundings, the tastes of the people have been easily and naturally led to the adornment of their noble city. A large number of public squares, spacious boulevards and extensive parks, comprising nearly two thousand three hundred acres, have been created and so well distributed and judiciously connected and arranged, as to furnish a grand system; none of them too remote for full and free enjoyment to-day, yet ample in extent and suitable in location, when St. Louis shall have quadrupled her present population.

Missouri Park, Hyde Park, Gravois Park, Jackson Place, Carr Place and Washington Square are all within the limits of the populated portion of the city, and although not yet decorated with much skill or expense, they have green grass and growing trees, and will, when the population becomes dense, be to St. Louis, what Madison and Union Squares, City Hall Park and Washington Parade grounds, are to the city of New York, the lungs of the city; places of recreation and amusement where, on the sward, among lofty trees with their graceful verdure and grateful shade, the children of toil may at least be reminded of the more extended beauties of nature.

LAFAYETTE PARK.

Larger in extent, Lafayette park contains thirty acres. It is nearly square, is bounded by broad and imposing streets and surrounded by elegant dwellings in the midst of extensive and highly decorated grounds.

A few years since, its site was an open common, without tree or shrub; now its dense shade, its mimic lake, water-falls and grottoes, its elegant and well constructed walks and paths, as well as its bright and numerous parterres, attest the cultivated and artistic taste of its founders as well as the generous soil and beneficent climate which have, so speedily caused, the arid waste to blossom as the rose.

NORTHERN PARK.

Occupying a prominent position on the bluffs and a commanding view of the extensive valley and waters of the Mississippi, the Northern Park, as its name indicates, lies in the northern portion of the city, and was the country seat of the late Col. John O'Fallon, who carefully, almost sacredly preserved its superb trees, which with its wide views and bold outline make it in truth a park. Already accessible by well traveled thoroughfares, these romantic and admirable grounds, containing one hundred and eighty acres, need only to be sufficiently penetrated with suitable drives and promenades to make it a charming resort.

TOWER GROVE PARK.

Shaw's Botanical Garden and Tower Grove Park, owe their existence to the beneficent design of a citizen of St. Louis, who devotes a princely estate, the most enlarged experience, exquisite taste and almost all of his time to their development, care and embellishment. An extensive arboreum connected with the Botanical garden, makes the latter complete. Combined, they embrace about three hundred and thirty acres, and are the pride and highest source of gratification to the people of St. Louis. The garden and arboreum contain almost every plant, flower, shrub or tree, indigenous or exotic, and have excited the attention and commanded the admiration of all visitors of taste and love of the refined and beautiful. Lying in one group they are all to be a gift to the people of St. Louis for their perpetual use and enjoyment. The park has been recently improved and opened to the public, it is well set in grass and abundantly planted in rare trees, deciduous and evergreen, e'er long to furnish abundant shade to its well constructed and delightful roadways. The Grand avenue entrance to the park is elegant and imposing, and many graceful pagoda-like summer-houses and other handsome buildings already adorn the grounds.

LINDELL PARK.

In its course from Forest Park to Grand Avenue, Forest Park Boulevard enters into Lindell Park, where for three thousand feet, the Boulevard is widened to the unusual width of two hundred and twenty-six feet. Lindell Park contains sixty acres, and is elegantly and charmingly situated on the greater portion of the only ridge, running east and west between Forest Park and the city. Crowned with trees of native growth, and embellished with great taste in ser-

pentine drives and walks it commands a fine prospect north and south, and of the city.

FOREST PARK.

Immediately west of the centre of the city; in the direct line of its greatest growth and progress; in full view of many of the elegant mansions of the wealthiest citizens; to be made at once accessible, by four leading lines of street railroads and a narrow-gauge passenger steam railway; with the depots of the Missouri Pacific near its southern boundary; with Lindell Boulevard and Forest Park Boulevard each about two miles long, the former one hundred and ninety-four feet, and the latter one hundred and fifty feet wide, running from the Park in parallel lines directly towards the heart of fashion and business; with four grand Boulevards bounding the Park on the north, south, east and west, the narrowest of which is one hundred and twenty feet; just four miles from the court house, lies Forest Park, the centre of the grand system of the beautiful Parks of St. Louis. As it is the central, so it is the largest, containing thirteen hundred and seventy-five acres. The Park bill provides for connections with the larger Parks, by grand Boulevards, and its approaches to the city have been secured by munificent contributions of the right of way. It lies within parallel lines, one mile in width and two in length. With as much natural beauty as distinguishes any other portion of St. Louis County, it is especially adapted, by rare and manifold advantages, to the enjoyment and recreation of the denizens of a great city.

Quite eleven hundred acres are still clothed with its primitive growth, the elm, linden, ash, tulip tree, sycamore, black, white, post and water oaks, the hackberry, gum and horse chestnut, the english and black walnut all of great size and in rich profusion, are the principal trees of larger size; while in countless numbers among those of smaller growth, are the flowering and blooming dogwood and redbud, making in their appropriate season the very forest a scene of beauty and enchantment.

The wild grape vine of great bulk adds its charm, here and there, by embracing in grotesque festoons clusters of smaller trees.

The river Des Peres in its meandering runs through Forest Park a distance of six or seven miles, now through gentle valleys and slopes and, ever and anon skirting abrupt and precipitous bluffs; with little cost and labor, its bed may be amplified into bright and extensive lakes. The soil is light, fertile, friable and admirably adapted to all of the requirements of a grand Park, and needs only to be exposed to sufficient light and free ventilation, to cover it with a fine and rich sward of the famous blue grass, which is its native growth.

The surface of Forest Park, most of it wooded, wild and rugged, a part softened away into all of the graces of cultivation, presents every feature for splendid adornment by landscape gardening, that the most enthusiastic lover of suburban scenery can desire. Its general level is more than one hundred and fifty feet above that of the rivers, while some points rise much higher, from which the city and surrounding country for many miles, presenting beauties

and attractions rarely combined, are in full view. It is strange, indeed, that this large body of land, now within the corporate limits of a great city, much of it in a state of nature; with its grand and majestic trees; its diversity of surface; its river and never failing springs; its incomparable surroundings; its proximity and accessibility by easy upward grades from the central and already fashionable part of the metropolis of the valley, should have been preserved from the rude hands of the Vandals which have laid low, near other cities, the monarchs of the woods, to be, at length, dedicated to the higher refinements of civilized life.

When the great forests of the west shall have been recklessly or ruthlessly destroyed, the name of Forest Park, now beautiful and appropriate, will become significant and poetical. When art with its magic touch, shall have traced its paths, and arranged its lofty trees in fanciful and attractive groups; transformed its rugged surface into beautiful slopes, terraced gardens, sheltered rambles, wide walks and capacious drives; collected crystal waters in sylvan lakes with little dots of islands, surrounded and adorned with fountains, jet d'eaux, grottoes and cascades; then will it become a vision of delight and enchantment; but its name will remain, to recall the sublime old forest, whose dark and sequestered wilds, the pioneer trod with awe if not with fear; and of the trials, dangers and hardships, which the founders of the great Metropolis have encountered and overcome.

ST. LOUIS PARK OF FRUITS.

With other works of magnitude, begun and in progress by the business men of St. Louis, is a great Park of Fruits, destined to extend over one thousand acres. From the annual address of its able originator and superintendent Mr. C. H. Haven, to the members of the Association, we take pleasure in extracting the following remarks, showing it to be in truth "the creation of the first park of the kind in the United States, of such an extent and usefulness, when completed, as will make it a matter of pride as well as profit to all concerned in its formation. The originality of, as well as benefit derived from this work, consists in possessing, as we now do, in the cultivated grounds of our first or Missouri river division, and in determining to have, on the beautiful site of our second or Pacific Railroad division, all the accessories of a park of flowers, such as avenues, drives, seats, etc., but distributed *among fruits of every description, instead of flowers*, while such a park, through the invitations given by our members, will be visited by and attract men of capital, and valuable emigration from all countries desirous of ascertaining, from actual observation, the worth and productiveness of the upland counties of our State, which form the nearest back-country to St. Louis for one hundred and fifty miles south and west of her; which counties should be the first to be settled, on account of the home trade it will give rise to, amounting to several millions of dollars annually, and which can never be diverted to any other point.

Such a park, we submit, will be of lasting benefit to St. Louis, while it will become the favorite resort of our members and their families forever when

seeking health and recreation, or when desirous of obtaining, fresh from our vines and fruit trees, their valuable products, or from our cellars the pure wines stored therein.

At present the Park of Fruits contains 400 acres, and it is the purpose of the association to increase it to 1,000 acres. There are now 590 stock-holders or members of the association, and Mr. Haven is pushing on the improvements, with a zeal and enterprise commensurate with the undertaking, and worthy the support of all our citizens.

NAME OF PARK.	DIMENSIONS.	AREA.	DISTANCE AND DIRECTION FROM COURT HOUSE.
Carondelet Park.....	600x230 feet.	3 17-100 acres.	4 1-3 miles S. S. West.
Laclede Park.....	600x230 "	3 17-100 "	3 3-5 miles S. S. West.
Gravois Park.....	600x600 "	8 252-1000 "	3 1-2 miles Southwest.
Lafayette Park.....	1142x1142 "	29 956-1000 "	1 1-2 miles Southwest.
Washington Square.....	792x330 "	6 "	3-8 of a mile W. (7 blocks).
Missouri Park.....	508x336 "	3 346-1000 "	3-5 of a mile W. N. W.
Carr Square.....	372x305 "	2 607-1000 "	9-10 of a mile Northwest.
Jackson Place.....	300 feet in diameter.	1 622-1000 "	1 2-3 miles Northwest.
Clinton Place.....	300 "	1 622-1000 "	1 2-3 miles Northwest.
Marion Place.....	300 "	1 622-1000 "	1 2-3 miles Northwest.
St. Louis Place.....	2320x300 feet.	15 303-1000 "	2 miles Northwest.
Hyde Park.....	789x690 "	11 833-1000 "	2 1-2 miles N. N. West.
Exchange Square.....	1180x500 6-12 "	15 18-100 "	1 3-4 miles North.
Tower Grove Park.....	1180x7458 "	276 76-100 "	3 1-2 miles Southwest.
Benton Park.....	605x1060 "	15 50-100 "	1 1-2 miles S. S. West.
Northern Park.....		180 "	3 1-4 miles N. N. West.
Forest ark.....		1376 75-100 "	4 miles West.
		1352 69-100 acres.	

ST. LOUIS AGRICULTURAL AND MECHANICAL ASSOCIATION.

This Association, incorporated by special Act of the State of Missouri, held its first Annual Fair, in October, 1856. Fifty acres of land, lying on the west side of Grand avenue, northwestwardly from the center of the city, a portion of the tract within, but the larger part without the then city limits, were deemed sufficient for the future wants of the association. It has since been almost doubled in extent, and now barely accommodates its increased demands.

These grounds were originally embellished with fine trees of natural growth, and now handsomely inclosed and ornamented with shrubbery, flowers, capacious drives, gravelled walks and a tiny lake, are highly attractive and beautiful. Added to these are buildings, costing nearly a quarter of a million of dollars, and admirably adapted to the wants of a grand exhibition of the agricultural and mechanical products of the mountains, plains and valleys of the great and growing west.

The new Amphitheater is magnificent in its proportions and pleasing and ornamental in its architectural design. It will seat twenty-five thousand persons and its ample promenades will accommodate nearly, if not quite, as many more. The arena, for equine, bovine, ovine and porcine exhibition, occupies a circle within the vast amphitheater, with a circuit of a quarter of a mile. Thursday is the great exhibition day of the "Fair week," when the schools are closed and business in the city of all kinds suspended, and on that day es-

pecially, the amphitheater is filled to its utmost capacity and presents a spectacle unequalled in its kind, perhaps, in the world. During the four years of the war, no meetings were held, so that during the sixteen years of its existence the association has had twelve exhibitions, each succeeding one surpassing in interest and attraction, its predecessor in proportion to the agricultural and mechanical development of the vast territory dependent on the imperial city of the valley of the Mississippi, until at the last Fair more than two hundred and fifty thousand persons visited it during the week, and one hundred thousand on a single day. The spacious Machinery and Mechanical Halls, the Cotton, Mineral and Geological Department, the Gallinarium, the stables for horses and mules and houses for cattle, hogs and sheep, furnish abundant accommodation, and are all upon a scale as liberal as the amphitheater itself.

A grand exhibition hall, circular in form, with an open area in the center embellished with a fountain and myriads of flowers, affords abundant space for the display of works of art, foreign and domestic, textile fabrics, pomological specimens and the other rarer productions of the farmer and horticulturist.

The buildings designed for the use of the officers of the association, for the newspaper press, the cottage of the superintendent and other structures are all highly ornate and beautiful. When the buildings are filled with their appropriate subjects for display and use, and the splendid grounds with the eager, restless and surging throng of exhibitors and visitors, a scene is presented of life and enjoyment, and of marvelous attraction and beauty.

If the St. Louis Agricultural and Mechanical association has had greater growth and prosperity, greater numbers of exhibitors and greater multitudes of visitors, grander and more imposing features, more vast and varied agricultural and mechanical products on exhibition, than any other association of a kindred nature in the Union, and if its progress has been uniformly upward and onward, it is a fair and legitimate deduction that St. Louis is the local point of the greatest agricultural and mechanical region of the United States.

Apart from the natural beauty of the grounds; the spacious, elegant and admirable arrangement of the buildings, the attractive, nay, enchanting allurements of the exhibition at which the higher works of art, natural or mechanical products, well-bred animals from every quarter of the globe apart from the joyous re-union of friends, or the opportunities to form new business or friendly associations, amid such rare scenes of beauty; the St. Louis Fair affords higher and more important advantages to the city, which gave it birth, and to the vast, growing and enormously productive territory, which finds in St. Louis its true center of trade commerce and civilization.

Each exhibitor unconsciously teaches the multitudes, the design, use and application of each new invention, and although the lessons inculcated, may not be complete, they carry to their homes some ideas of the vast field of production and invention, and are elevated and enlightened in proportion to their acquirements and capacity.

Besides the vast sums of money which are collected and distributed at every fair in St. Louis, "the influence of the Fair in the introduction of better stock, in bringing to the knowledge of the public, better farm implements, better

seeds, and better modes of cultivation, in making one man's labor equal to that of half a dozen under the old regime, it greatly increases the quantity and quality of farm products, and adds to the value of real estate. In these various ways the St. Louis Fair adds every year millions to the actual wealth of the western country, and its power of thus creating wealth will continue to increase from year to year, as its influence extends to new communities and new neighborhoods."

Twenty miles below the confluence of the two largest and most majestic rivers of the continent, affording with their tributaries, more than 18,000 miles of steam navigation; at the central and natural point of exchange for the productions of the north and the south; connected by railroad with a region embracing 2,500,000 square miles and rich beyond example in mineral, mechanical and agricultural resources; within the corporate limits of a great city; is located the home of the St. Louis Agricultural and Mechanical Association, the most cherished institution of the people of St. Louis, and contributing more than any other single enterprise, to the development of her commerce, manufactures and civilization.

Its popular name the "St. Louis Fair," has become a house hold word, and being held at that auspicious season, when nature has assumed her bravest livery; after the bounteous earth has yielded up her richest harvests; visitors flock in great multitudes in pursuit of pleasure, business or recreation to its extensive and well-appointed grounds, to indulge in the charms of social enjoyment, to examine the works of the marvelous industries of the age, or by comparison of the specimens of human labor and skill, to inform them of the best means to supply their wants.

WATER AS AN IMPORTANT AUXILIARY TO THE GROWTH OF A GREAT CITY, AND THE ADVANTAGE POSSESSED BY ST. LOUIS FOR AN INEXHAUSTIBLE SUPPLY.

A liberal supply of water has at all times been considered one of the chief necessities to the growth and prosperity of a large city. In many parts of Syria and Palestine large reservoirs and tanks were constructed in the past, which at the present time are the only resource for water during the dry season, and a failure of them involves drought and calamity.

The most celebrated of the pools mentioned in Scripture are the pools of Solomon, about three miles southwest of Bethlehem, from which an aqueduct was carried which still supplies Jerusalem with water. These pools are said to be three in number, partly hewn out of the rock, and partly built with masonry, but all lined with cement. The largest of them is 582 feet long by 207 feet wide and 50 feet deep.

The Romans spared no expense to procure for their city an abundant supply of pure water. Their aqueducts, some of which are still in operation, at one time carried to that city 350,000,000 gallons of water daily, or 290 gallons daily for each inhabitant. Some of these aqueducts had a length of from thirty to seventy miles, and in magnificence and costliness far surpassed the most celebrated works of modern origin.

The earliest and most liberal provisions for a water supply on our own continent were made by the cities of Philadelphia, New York, and Boston, and to this must be ascribed in a great measure, the rapid growth of these cities. In 1860 the amount of water supplied daily to each inhabitant of these cities averaged ninety-seven gallons in Boston, fifty-two gallons in New York, and thirty-six gallons in Philadelphia. The works in these cities when designed, seemed to be of sufficient capacity to furnish a supply for many years, but their growth has been so rapid that they already feel the necessity of husbanding their resources, and of taking measures to extend their works so as to be enabled to meet the increased and increasing consumption. In fact, during the severe drought of last year a scarcity of water was experienced in each of these cities, owing to the inadequacy of their sources of supply.

The great advantage possessed by St. Louis in this respect, consists in the fact that its source of supply is inexhaustible. The Mississippi in time of an ordinary stage carries past the city about 1,500,000 gallons of water per second, or enough in six seconds to supply the present necessities of its inhabitants for a whole day. It is not only abundant, but is one of the most wholesome waters known. It is true that in time of high water it contains a large percentage of sedimentary matter, brought down by the swift current of the Missouri river, but of this it is easily freed by settling and filtering. And it is

worthy of mention here that the old inhabitants of our city are so far from being averse to this admixture of sedimentary matter, that they almost regret that the new works now in course of construction will furnish them settled or clear water.

The first waterworks in St. Louis consisted of a reservoir on the Big Mound, supplied by a small engine from the Mississippi river. It was constructed in 1829-30, and designed to contain 300,000 gallons. The city of St. Louis then numbered 5,852 inhabitants. In 1850, the population being then 77,860, a larger reservoir was completed, holding about 8,000,000 gallons. This reservoir has also been out of use for many years. The reservoir by which the city is now supplied was finished in 1855, when the city contained 125,000 inhabitants. The water is pumped into it by three pumps located at the foot of Bates street, and having a total capacity of about 11,000,000 gallons per day. One of these pumps was procured by the present Board of Water Commissioners in 1868, the other two not having sufficient capacity to supply the city beyond a contingency. Previous to the year 1860 it had become apparent that the existing works would soon be insufficient to supply the city. In fact, the area of the city had been extended so much, and in the direction of grounds so much higher than the reservoir, that a large portion of the territory included within the new limits could not be supplied. The question of new and more extended works was agitated for several years, but without any result, until the Governor of the State, under a law passed in January, 1865, appointed a Board of Water Commissioners. These gentlemen appointed Mr. James P. Kirkwood, the acknowledged head of hydraulic engineers in the United States, since his completion of the Brooklyn waterworks, their Chief Engineer.

In October, 1865, Mr. Kirkwood submitted several plans of works to the Commissioners. The one adopted by them was subsequently rejected by the Common Council, to whom, according to the then existing law, belonged the final decision of the matter. The members of the Board of Water Commissioners resigned, and a new Board appointed by the Governor, having retained Mr. Kirkwood's services, submitted new plans to the Common Council for approval, after Mr. Kirkwood had modified his former plans so as to bring them in accordance with the expressed opinion of the Council. There seeming to be but little hope that the conflicting opinions of the members of our City Council would ever admit of their approving any plan, a new law was passed by the Legislature which placed the whole matter in the hands of a commission of three members, and authorized them to apply the proceeds of three and a half million of bonds, to be issued by the city, to the construction of the works. The new Board appointed as their Chief Engineer Mr. Thomas J. Whitman, an engineer of long experience in hydraulic works. Mr. Kirkwood had declined to accept the position again, but consented to act as consulting engineer.

The plan of their predecessors, with some slight alterations, was adopted by the new Board, and after acquiring the necessary land they proceeded at once with the construction of the works. A brief description of these works,

which so readily furnish the city with an abundance of pure and wholesome water, is given below :

The water is taken from the Mississippi river, at what is called Bissell's Point, close to the northern boundary of the city. It first enters an iron tower, 80 feet high, sunk to the rock, and provided with gates at different heights, so that the water may be taken at any desired depth below the surface. In this tower are several strainers and screens to free the water from foreign matter before entering the pump-well. From this tower a pipe of $5\frac{1}{2}$ feet interior diameter and 300 feet in length, conducts the water to the pumping engines, that are to lift it into the settling reservoirs. These engines are two in number, and are duplicate engines of the Cornish-bull class—steam cylinder 64 inches diameter, 12 feet stroke, and plunger 54 inches in diameter and 12 feet stroke, each of a capacity to pump 17,000,000 gallons in twenty-four hours. The foundations for these engines are of the most substantial character, and to provide for the rapidly increasing demand, have been constructed large enough to hold three engines, although one engine, working half time, could supply the present average demand of the city. To free the water from the sedimentary matter, or to settle it, particularly at seasons of high water, four settling reservoirs, each 240 by 660 feet, and averaging in depth about 20 feet, have been constructed close to the river bank. The water pumped by the low-service engines is, by an appropriate set of gates, admitted at will into either of these four reservoirs; there it is left at perfect rest for twenty-four hours, during which time, according to experiments made on the subject, about nineteen-twentieths of the sedimentary matter falls to the bottom. During the next day the water is drawn off by a system of gates so arranged as not to stir up the sediment, and allow the water to discharge at all times near its surface; the last three or four feet of water is not drawn off, but on the fourth day is allowed to run out into the river through proper sluice-gates, taking with it most of the sediment, while the remainder is washed out with the aid of an engine, and the reservoir is then ready for a new supply. Thus, each of the four reservoirs passes through the cycle of operation during four days. The water, after leaving the settling reservoirs, runs by gravity through a covered conduit about one-half mile long, into a small reservoir near the high-service engines, called the clear-water well, and from it through a short conduit to the high-service engines. These are two in number, with steam cylinders of 85 inches diameter and ten feet stroke, and pump cylinders 50 inches diameter and the same stroke. To give an idea of the size of these engines, we will state that the walking beam of each engine alone weighs 32 tons, and the fly-wheel 36 tons; in fact there are only one or two engines in existence that have a larger capacity than these, each of which must be able, according to contract, to raise sixteen and a half million gallons to a height of 270 feet within twenty-four hours. These engines were built by the Knapp Fort Pitt Foundry Company, at Pittsburg, Penn. They pump through a force main five miles in length, and of 36 and 30 inches diameter, into the storage reservoir on Compton Hill. To relieve the engines and force main from any concussion, a stand

pipe is now in process of construction, which, when completed, will have a height of 242 feet above the ordinary high-water level of the river. It is about one-half mile from the high-service engines, and will, from its summit, present a view of the whole city, and of the river for many miles in its course. Before reaching the storage reservoir, two pipes of 20-inch diameter, branch off into the city and connect it with the present system of distribution, while a third feeder of the same size starts from the storage reservoir so as to secure continual motion, and thereby prevent the water from becoming foul.

The storage reservoir covers about seventeen acres of land, and is built near the city boundary, at the most elevated point within its limits. The elevation of its water surface will be twenty-six feet above the highest street grade, and will be ample to supply the upper story of every house in the city. We must not omit to mention in this connection, that the greatest portion of the 8,000 tons of large pipe needed in the construction of these works, has been cast in this city by the enterprising firm of Shickle, Harrison & Howard.

Having briefly described the works which supply this great city with water, it now remains to consider the quality of the water upon which her citizens subsist from day to day. The Mississippi river is not only the source of the prosperity of our city, more than any other agency, but as it supplies the water necessary for the inhabitants, and consumed in the various industrial processes, it is the perennial and essential fountain of individual and commercial life. The discolored appearance of the water, as ordinarily taken from the river, very naturally creates the impression that its use must be prejudicial to health, although even a stranger must admit its peculiar sweetness and purity of taste. The fact, however, is now fully demonstrated, alike by practical experience and scientific analysis, that this water is excellently adapted for human use, and that, in mingling its yellow flood with the Mississippi, the Missouri has in no wise deteriorated, but rather improved the quality and wholesomeness of the original stream. Contrary to the popular idea upon the subject, clearness in river water forms rather an objection than a recommendation for its general use. The Wabash and Illinois rivers are clear, but the water is inferior in quality to that of the Missouri, and the people living on the Meramec bottom do not use the water of that river, although clear, but supply their wants from other sources. Among sailors, the water obtained from the river at New Orleans is in high repute, and they say that it, and the water of the Nile are the best in the world for long sea voyages, keeping fresh and sweet during periods when that obtained from other sources is almost unfit for use. One reason assigned for the preservative qualities is, that the Missouri river water, flowing down from the snow mountains, is too cold for animalcule to live in it, and being free from vegetable matter, and with a current so swift that stagnation is impossible, and rarely overflowing the banks except in high floods, there is nothing mingling in it that can contaminate, while the confluence of the various tributaries only increases the admixture of sand and alluvial without adding any elements calculated to deteriorate. The Missouri and Mississippi water is, consequently, excellently adapted for human use, while the attractiveness of

perfect clarity can be secured by the cheap and simple process of letting the sediment settle before use, so that this one objection is easily removed. Nearly every person who has once become accustomed to the use of our river water prefers it to any other on account of its constant sweetness and freshness of taste, and even in the country, the people living on the Missouri river prefer the river water for drinking to that which they can obtain elsewhere. It is said of Col. Benton, when in Congress, that he had his drinking water at one time shipped from St. Louis to Washington. The superior quality of this water has been frequently tested, and our fellow-citizen, Mr. Easterly, daguerrean artist, whose business demands the purest water, has bestowed some careful labor on the subject with very satisfactory results. We present the following interesting statements prepared by that gentlemen for publication more than two years ago :

“Allow me, as a party interested, to call attention to a few facts that have come under my own observation in relation to the much abused water of the Mississippi. In the winter of 1844, I made the trip by sea from New York to New Orleans, on the packet ship Mississippi. Our commander was Capt. Hillard, who was saved from the burning steamer Lexington, on Long Island Sound, by lashing himself to a bale of cotton. He was a man noted for coolness in danger, and strictly truthful on all subjects. The captain assured me that the water we were drinking was taken on board the ship at New Orleans, had made the trip from there to Liverpool with a cargo of cotton, from Liverpool to New York, and was then on its way back to New Orleans. He said that they had taken water on board at Brooklyn, New York, but that it was not so good. He also told me that the Mississippi water would keep longer at sea than any water known to seafaring men, and next in quality was the water obtained at Brooklyn. In a later conversation with the mate, he confirmed all that the captain had said on the subject. We used ice in the water most of the time, and I confess that to my taste it was as pure as the water from my native hills in Vermont.

“Capt. Hillard’s statement induced me to further investigate the subject, and in the summer of 1847, by way of experiment, I filled a five-gallon stone jar from the hydrant, and placed it in a small hall-room in the fourth story of Glasgow’s row, then over the Mercantile Library Hall. The room was closed for two and a half months from the first of June, and the hot sun poured in at the east window at will. At the end of this period, the water was found on examination, to be perfectly clear and pure to the taste, except that it was warm. I drank of it freely and frequently, and no bad result followed.

“On the 20th of June, 1850, I started on a pleasure trip to the Falls of St. Anthony, on the steamer Anthony Wayne, the first steamer that ever made a landing at the Falls. Between St. Louis and the mouth of the Missouri river I filled a five-gallon demijohn with water from the current of the river, placed it on the upper deck of the steamer, where it would be most exposed to the weather and hot sun, in which condition it remained until we again reached St. Louis, which was fifteen days from the time of starting. I then subjected it to

the weather and sun as much as possible until the middle of November. I then bottled a portion of it, and have it now, subject to the inspection of the scientific and curious. It is now nearly seventeen years old, clear, pure and sweet to the taste, and has never undergone the process of fermentation which some believe necessary to the purification of water. I will here state that the sand was allowed to settle of itself without the aid of any of the articles sometimes used for clearing the water, all of which will cause it to taint, except alum.

"In 1866, I used a saturated solution of alum in the proportion of one fluid ounce to eight gallons of water, and, on applying our test for daguerreotype uses, found the water sufficiently pure for all practical purposes; and to finish a daguerreotype on silver plate, we must have pure water, especially for removing the gilding solution, which is the last washing. The test (well known to every chemist and druggist in the country), is a few grains of nitrate of silver, in a small quantity of water, and if pure no change is perceptible, but if impure the water will change color or turn milky. Let the water settle without the aid of alum, and the nitrate of silver will change the color to a milky appearance on account of the lime in the water, but with the alum in proper quantity, no perceptible change takes place—a proof that the water is pure, or as nearly so as water can be when exposed to the atmosphere. We now use it for chemical purposes where we once thought distilled water indispensable.

"It is a well-known fact that all, or nearly all of the spring and well water in the West will taint by standing twenty-four hours in a bucket or pitcher, while the Mississippi water will get warm, but remain sweet to the taste for days and months, in a clean vessel."

The most recent analysis of our river water, is that made by Dr. Theodore Fay, chemist of the Board of Water Commissioners, which is given in the following form, exhibiting the comparative quality of the water obtained from the old and new reservoirs:

WATER DRAWN FROM HYDRANT (OLD SUPPLY).

Solid matter separated by filter.....	232	grains per gallon.
Hardness.....	7.05	
Oxydizable organic matter.....	.504	grains per gallon.
Carbonate of lime.....	5.60	" "

SETTLED WATER DRAWN FROM HYDRANT (NEW SUPPLY).

Hardness.....	8.75	
Oxydizable organic matter.....	.784	grains per gallon.
Carbonate of lime.....	7.17	" "

Animalcula in considerable number.

Dr. Fay, in connection with the above, makes the following explanation:

"The above statement in regard to the difference in organic matter and hardness is hardly a fair test, on account of the excess of time that the water remained exposed to the sun, and solution of a portion of the lime used in the construction of the reservoirs and culverts, in which many thousands of bushels have been used. It is my opinion that we will have as good water from the

Mississippi as any in the United States when the clay and sand are removed." In view of these considerations, and others which they suggest, the question of the water supply for St. Louis is finally and satisfactorily settled. In this, as in other essential elements, Nature has prophetically provided for the great destiny of our city.

HEALTHFULNESS OF ST. LOUIS.

The statistics recently presented in the able report of Dr. Wm. L. Barrett, Health Officer, fully demonstrate the healthfulness of St. Louis as a place of residence. The following official table shows conclusively that the death-rate here is below that of any of the important cities of the country.

PRINCIPAL CITIES.	Population, United States Census, 1870.	Deaths in 1870.	Ratio of Deaths per 1,000 of Population.
New York.....	927,436	27,175	29.3
Philadelphia.....	657,179	16,750	25.5
St. Louis.....	312,963	6,670	21.3
Chicago.....	299,370	7,342	24.5
Baltimore.....	267,599	7,262	27.1
Boston.....	253,984	6,096	24.0
New Orleans.....	184,688	6,942	37.6
San Francisco.....	150,361	3,351	22.3

The following official tables also contain some interesting statistics respecting population and mortality, etc.

TABLE showing the Population, Mortality and percentage of same by Wards ; the Area, Sewerage and Population according to the number of Acres in each Ward.

WARDS.	NUMBER OF DEATHS DURING												Total.	Population.	Per cent. of Mortality.	Area in Acres	Average Population per Acre.	No. Acres.	
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.						Drained.	Not Drained.
First.....	39	44	44	40	34	49	86	61	60	48	37	35	540	34,008	1.58	4,884	1.58	67	4,817
Second.....	48	52	50	43	31	46	67	51	58	51	40	41	578	12,155	2.60	950	23.32	133	817
Third.....	50	37	44	39	40	50	86	46	50	51	42	43	577	24,178	2.38	580	41.68	179	401
Fourth.....	43	36	39	34	29	48	80	45	48	54	34	47	517	38,873	1.32	850	45.73	238	612
Fifth.....	46	34	38	35	29	39	67	48	50	57	44	41	528	30,074	1.75	550	54.68	196	354
Sixth.....	43	31	36	31	31	45	61	46	45	53	33	39	494	20,013	2.46	650	32.31	410	240
Seventh.....	47	41	42	36	38	48	60	53	51	51	38	47	562	18,601	3.	480	38.85	313	167
Eighth.....	48	42	35	36	42	54	61	67	53	52	40	41	531	26,910	2.16	210	132.90	200	10
Ninth.....	53	46	53	48	46	64	67	75	55	53	39	39	648	22,322	2.41	420	53.14	165	255
Tenth.....	49	49	42	47	48	63	82	64	58	45	48	35	641	20,923	3.06	270	77.49	153	117
Eleventh....	41	36	35	38	34	49	65	47	44	48	32	41	531	32,786	4.61	1,000	32.78	159	841
Twelfth....	46	29	30	29	27	41	63	43	38	51	37	43	473	20,021	2.36	1,460	13.80	54	1,306
Total....	547	477	488	456	429	591	848	646	610	615	464	494	6,670	312,963	2.12	12,294	48.27	2,267	10,027

It will be readily observed, from the above, that there is uniformity in the ratios of the increase of population and mortality. In fact, as the city has expanded in its material development, its health has improved. This, of course, is largely due to the extension and efficiency of the sewerage system, and the general improvement of the sanitary condition of the city. These facts are corroborative of an important truth long since established by civilization: that the better people are clad, and fed, and sheltered, the greater is their longevity, and consequently the shorter the period required for a generation. The increase of food, and clothing, and shelter, also carry with them the presumption that civilized men have made rapid improvements over the face of the country, by destroying the natural vegetation, reclaiming the swamps, and thereby produce a healthier condition of the atmosphere. The growth of great cities does not deteriorate the health of a country, and the multiplication of population does not raise, but actually diminishes, the death-rate. A vast metropolis, with its countless houses and myriad people, is, after all, not a stronghold of death; and although its inevitable visitations are more appalling because presented in aggregate form, they are really numerically less than if the same diseases were working their way through the same number of people ruder and more dispersed. To establish this truth we have not to look far. The ratio of mortality among the Indian tribes is considerably greater than in the denser localities of civilized men, where towns and cities exist.

STREET RAILWAYS IN ST. LOUIS.

In 1843, Erastus Wells, now our respected and valuable Representative in Congress, from the First District, and Calvin Case, established the first omnibus in St. Louis, the rolling stock consisting of one omnibus. It differed considerably from the kind now in use, having no glass windows, but curtains instead, and elliptic springs in place of the present low flat ones, and was built in this city, at a cost of \$200. The route was from Third and Market, along Third and Broadway to North Market street; and the receipts for the first six months did not exceed \$2.50 per day. In 1844, the enterprising proprietors put on another coach, and within five years increased their business considerably, and had from twelve to fifteen busses running, and for the first two years Mr. Wells drove one of them himself. In 1844, Michael Sutter started a line on Second street and Carondelet avenue, running from Market street to the Arsenal. During the ensuing year, Mr. M. Kountz established a line on Market street, running between Main street and Camp Spring; the same year, T. O. Duncan and John C. Vogel started a line on Franklin avenue, between Broadway and Twenty-fifth street, having purchased for the purpose, from Case & Wells, their pioneer omnibus, for \$100. In 1846, Luther Case commenced a line on Fourth and Seventh streets, between Green street and Flora Garden. In 1850, Calvin Case, Erastus Wells, Robert McO'Brien, and Lawrence Mathews, forming the firm of Case & Co., purchased all the lines in the city, and established a coach line between here and Belleville, Ill., and subsequently one on Olive street, between Fourth and Seventeenth streets. In Jan-

nary, 1856, the copartnership was dissolved, by the death of the senior member, who was killed in the memorable accident on the Pacific Railroad, at the Gasconade bridge. The different lines were owned and operated by the surviving partners, but separately, until 1859, when the street railway mania reached St. Louis, and the omnibuses were speedily superseded.

The St. Louis, Missouri, Citizens', and People's Railway Companies were formed in the spring of 1859, and the first company that started their cars, was the Missouri, on their Olive street line, on July 4, 1859. The first President was Erastus Wells, who has filled that position up to the present time. They have now nine miles of track. The St. Louis commenced operations during the same summer, and has now fifteen miles of track; D. H. Armstrong was the first President. The People's Line commenced running in the autumn of the same year; Col. R. M. Renick, President, and has now six miles of track. The Citizen's got under way in August, 1859; B. Gratz Brown, President, with six miles of track. In 1862, the Union Railway started; B. Gratz Brown, President, and with six miles of track. In 1864, the Tower Grove & Lafayette Company commenced running; R. M. Renick, President, and seven miles of track. The Lindell Railway Company got under way in 1866; Dwight Durkee, President, with nine miles of track. The same year the Bellefontaine Railway Company went into operation; Mr. Krum, President, and six miles of track. The Suburban Railway Company was started in 1860; A. R. Easton, President, and four miles of track. The total length of street railway in St. Louis is about 70 miles, and from 160 to 170 cars are employed each day, carrying from six to seven thousand passengers. Not less than 1,400 horses are required in the business of these lines, and over 500 men are constantly employed. It is thus seen that the increase in this line of business has fully corresponded with the general growth of the city. Twenty-eight years ago there was one omnibus running, carrying not more than fifty passengers per diem; now we have nine distinct lines, each doing a prosperous business and representing a large amount of invested capital. There is something appropriate and fitting in the fact that the man who was mainly instrumental in laying the foundation of this extensive business is now one of the representatives of St. Louis in Congress. Mr. Wells is a prominent representative of the self-made men of the West. His career has been valuable in many ways to St. Louis, and his political elevation is an evidence that his fellow-citizens appreciated his worth, and his earnest labors in behalf of the city.

STREET IMPROVEMENTS, ETC., IN ST. LOUIS.

The following particulars have been obtained from the office of the City Engineer: Total length of street pavement in St. Louis, 174 miles; total length of sidewalk pavement in St. Louis (about), 300 miles; total length of wharf pavement ($11\frac{1}{2}$ miles river front), $2\frac{1}{4}$ miles; total length of water-pipe laid in St. Louis, 102 miles; total length of sewers in St. Louis, 117 miles; total number of streets, 600. The total length of public sewers in the city is $24\frac{1}{2}$ miles; total cost, \$1,730,389.08. Total length of district sewers, $92\frac{1}{2}$ miles; total cost, \$1,948,000.

THE ST. LOUIS STEAM FIRE DEPARTMENT.

ITS ORGANIZATION.

Like all other cities, St. Louis had her independent Fire Department, and probably, for a long time there was not a better independent department in the country; but as the city increased in population the better element of the department was worked out or swallowed up by that element which has disgraced nearly every independent department in all the large cities throughout the country; things in this city went on from bad to worse, until our streets became the nightly scenes of riot, bloodshed and confusion among the firemen, while property was being destroyed by the devouring elements. So fearful did the strife rage between some of the independent companies, that the good citizens felt that there must be something done toward changing the organization of the department; the matter finally attracted the attention of the city officials, and in 1857 the City Council passed an ordinance establishing and regulating a "Paid Fire Department." The late Hon. John M. Wimer was Mayor, and took a deep interest in the new organization, he appointed H. Clay Sexton, Chief Engineer of the Fire Department under the new ordinance, and the City Council appointed Messrs. Geo. Kyler and John Sexton of the Board of Aldermen, and Davis Moore and Henry Almsledt of the Board of Delegates, as a "Board of Fire Engineers." This Board held its first meeting on the 24th day of August, 1857, and organized by electing George Kyler, Chairman, and George W. Tennille, Secretary. The Board then elected Messrs. John W. Bame and Richard Beggs as Assistant Chief Engineers. The new organization was not effected until the 14th day of September, 1857. On this day the officers of the Department took charge of the following engine houses, with engines and other apparatus pertaining thereto, viz: "Franklin," "Washington," "Mound," and "Old Union No. 2." The three first were hand-engines, the latter was the first Steam Fire Engine ever brought west of the Mississippi river; she was built in Cincinnati, Ohio, by Abram Shawk, Esq., and purchased by the "Old Union Fire Company No. 2" (independent); she weighed eight tons, and was brought across the Mississippi river upon the ice, on the 15th day of January, 1856. With those four companies the new organization started out upon the doubtful mission of a reformation of the Fire Department of St. Louis. We say doubtful, because at that time the independent organization of the city was very strong, and with but few exceptions were opposed to the new organization. The "independents" for a time did all they could to retard the working of the new organization, and threatened political annihilation to any and all who favored the new organization, but fortunately, before another election came off, the new organization had proved itself so efficient, that public sentiment began to speak out in its favor. On the 28th of September, 1857, the Board of Fire Engineers entered into a contract with A. B. Latta, of Cincinnati, for three of his third-class Steam Fire Engines, to be delivered in ten, thirty, and sixty days. After the receipt of these three fire Kings the old independent department began

to dissolve like snow before a summer's sun, and the new organization was an acknowledged success, and a fixed fact. The first semi-annual report of the new organization, made March 1st, 1858, makes the following showing as compared with a like report of the independent organization made from September 14th, 1856, to March 1st, 1857, to-wit :

OLD ORGANIZATION.

Loss by fires from September 14, 1856, to March 1, 1857	\$595,580
“ to Insurance Companies on same	383,010

Loss over and above Insurance \$212,570

NEW ORGANIZATION.

Loss by fires from September 14, 1857, to March 1, 1858	\$244,930
“ to Insurance Companies on same	141,550

Loss over and above Insurance \$103,380

After this report was made public, showing a difference of over one hundred per cent. in favor of the paid department over the volunteer, and steam over hand engines, every good citizen was satisfied that the new organization was the best and cheapest, although it might cost more in dollars and cents to keep it up; and thus died the old independent and hand-engine Fire Department of St. Louis. A great auxiliary to the new organization was the establishing of the “Fire Alarm Telegraph,” which was completed and put in operation by Messrs. Gamewell & Co., on the 2d of January, 1858, and a committee on “Fire Alarm Telegraph” was appointed by the City Council, consisting of Messrs. Charles R. Anderson and Charles H. Tillson of the Board of Aldermen, and John W. Burch and J. H. McChure, of the Board of Delegates; said committee held its first meeting on the 2d day of January, 1858, and appointed Mr. James A. Gardner, Superintendent of the “Fire Alarm Telegraph.” The old organization seeing the success of the new one, soon broke up theirs, and many of the best men in the old organization became members of the new one, surrendering their property to the city for a nominal consideration (with but two exceptions.)

The home Insurance Companies were so well pleased with the working of the new organization, and the efficiency of the three Steam Fire Engines, that they purchased two more of Mr. Latta, and made them a present to the city, and the city purchased another. With these additions the Department felt confident of their ability to contend successfully against the ravages of the devouring elements, and the citizens felt satisfied that their lives and property were comparatively safe from the ravages of fire; and neither were mistaken, as the annual report of the officers of the Fire Department, made on the first of March, 1859 will show, in comparing the new with the old organization. They say :

OLD ORGANIZATION.

Loss by fires from October 13, 1856 to October 13, 1857 (this
being the last year of their existence)..... \$1,302,250

NEW ORGANIZATION

Loss by fires from March 1, 1858 to March 1, 1859..... \$211,623

Showing a difference of five hundred per cent. in favor of a paid department, fully equipped with Steam Fire Engines, over an independent and voluntary department equipped only with hand-engines. With this showing, it was only considered necessary for the future protection of property from the flames, that as the city increased in population and expanded in territory, the necessary additions should be made to the Fire Department, and all would be well. In October, 1860, the city purchased one of Naefie & Levy's Steam Fire Engines.

There were no change in the officers of the Department from its organization up to the 20th of June, 1862, at which time Geo. W. Tennille, Secretary, was removed on account of his Southern sympathies, and on, or about the 3rd of September, of the same year, H. Clay Sexton, Chief of the Department, was removed, arrested and put in prison for the same reason, by order of General Schofield. Mr. Charles H. Tillson was elected Secretary, by the Board of Fire Engineers, and General Schofield appointed George N. Stephens as Chief Engineer. During his administration, which extended to the first Monday in January, 1867, the city purchased one more of A. B. Latta's Steam Fire Engines, and two of Silsby's Rotary Engines. On the first Monday in January, 1867, Mr. A. C. Hull, having been appointed Chief Engineer, entered upon the duties of his office, which position he held until the second Monday in May of the same year. Mr. John W. Bame, having been appointed Chief Engineer, took charge of the Department on the second Monday in May, 1867, and held the position to the second Monday in May, 1869. During his and Mr. Hull's administrations there were no engines added to the Department. Under Hull's administration the city purchased one Hook and Ladder Apparatus, of E. C. Hartshorn, of New York. On the second Monday in May, 1869, H. Clay Sexton, having been appointed to the office of Chief Engineer, assumed the duties of the same, and holds the position at the present time. Geo. W. Tennille was also appointed Secretary in May, 1869, and still holds that position. In 1871, there was an ordinance passed by the City Council, increasing the number of Assistant Engineers to three, and John W. Bame was appointed to the office of Assistant Engineer on May 3d, of the same year. During the present administration of Chief Engineer Sexton, the city has purchased six new Steam Fire Engines all of the "Latta" patent, with Ahrens & Co.'s improvement on them. They were purchased of C. Ahrens & Co., of Cincinnati, Ohio. All of the Steam Fire Engines purchased by the city from the commencement of the new organization to the present time are still in active service, with three exceptions, viz: The "Old Union" and the two rotaries, "Silsby" patent.

The equipments of the Department at the present time are as follows: Fourteen fire companies, equipped as follows: One Steam Fire Engine, one Hose Carriage, and horses to draw them, two thousand feet of $2\frac{1}{2}$ inch Rubber Hose, and eight men to each company; two Hook and Ladder Apparatus and two Fuel Wagons, with horses to draw the same. The present officers of the Department are the same who first started it, with the addition of one Assistant Engineer, Mr. Jacob Trice.

The efficiency of the Fire Alarm Telegraph has been increased from time to time, as the necessities of the Fire Department required, by adding new alarm boxes. It started in 1858, with sixty-three boxes, and it now has one hundred and sixty-five boxes. This brings the whole Department up to December 3rd, 1872, on which day the City Council passed an ordinance appropriating money for the purchase of three more Steam Fire Engines, six Hose Carriages, and ten thousand feet of hose for the use of the Fire Department.

AN EXHIBIT—A COMPARATIVE TAXATION OF PRINCIPAL CITIES.

The following interesting exhibit prepared by Capt. Sam. Pepper, President of the Board of Assessors, of St. Louis county, will be read with interest, not only by our own citizens, but by people all over the United States. The data are all taken from the official reports of the cities mentioned, and the calculations have been carefully made. To persons looking out for remunerative investments for capital, or for new homes for themselves, this exhibit will prove peculiarly interesting:

In this fast age of steam, the currents of travel and commerce are being revolutionized, and population and capital gravitate rapidly to those centres possessing the greatest remunerative attractions for labor and business. The city that would keep well abreast in the race for expansion and supremacy must not rely too much upon its supposed natural advantages, but with zeal and united effort quicken and make available all advantages within its reach.

It is proposed in this connection, to briefly examine the city of St. Louis, as compared with a few other leading centres of trade, to see if she is entitled to attract to herself a fair share of the population and business that are ever seeking new fields of enterprise, as well as to hold fast to what she has already gained. Expenses of living and of transacting business have an important influence in determining location. It is of little importance to the merchant how active his business may be, or to the laborer what wages he receives, if nothing is left after paying expenses; both would prefer a location where a surplus remains after expenses are paid.

St. Louis, located in the heart of the Mississippi Valley, in which is produced immense surplus supplies of breadstuffs, meats, fruits and vegetables, accessible by 15,000 miles of navigable rivers, with her grand network of railroads penetrating all portions of this vast valley, furnishing quick and cheap transportation for all the products of the soil—it must be apparent that at no other

place in the world where labor is remunerative, can staple provisions of the same quality, be furnished cheaper, than at St. Louis.

Next to provisions in the cost of family expenses, is that of house rent, or, differently stated, the expense of living in one's own house. The house represents capital, and it costs the owner as much to live in it as it does the lessee, in either case the net rental being measured by the net interest the money would produce.

In furnishing cheap, comfortable and healthy homes, St. Louis offers rare inducements. There was a time when this was not the case, and rival cities offering greater inducements in this regard were largely benefited thereby. When the heavy business was chiefly done on the Levee and Main street, and choice residence property was drawn within narrow bounds and held at high prices; before sewerage and drainage had transformed vast acres into choice building sites; before railroad transportation, steam and horse, had equalized value at remote points from business centres, by furnishing cheap conveyance to and from all points within the city limits, cheap homes were not easily obtained in St. Louis. But a new and brighter era has dawned upon her. Cheap homes can now be furnished within easy access of business, shop and foundry, on finished streets, with gas and water, on, or convenient to, lines of street cars. Building lots thus situated, can be bought, and comfortable dwellings erected thereon, cheaper in St. Louis than in any city in the United States having a population of 150,000, excepting the city of Philadelphia.

To this fact more than any other may be attributed the rapid growth of St. Louis during the last few years, and which is the best guarantee of her future prosperity. Cheap homes are the want of the million; they not only reduce the expenses of living, but the people will become owners of their own homesteads, and once having an interest in the soil, their local and business interests become more closely identified with the city's welfare, making her population more permanent and at the same time contributing to her revenue.

Persons of limited means, mechanics and laborers, of industrious and saving habits, can by small monthly or quarterly payments, in a comparatively short period become owners of their own homes, without waiting to provide all the money before purchasing. The making of debts is not generally to be commended; but to a moderate extent in the purchase of a home, where full consideration is received, they are not only commendable but tend to stimulate energy, and the money thus paid is better secured against loss than if invested in any other manner. In addressing the Social Science Association of Philadelphia, Mr. Cochran truthfully said: "People who own the soil naturally feel that they have a greater interest in the community—in its welfare, peace and good order—and they are fixed more permanently to it as a place of abode; and the laborer or mechanic who is working to secure or pay for a home is inspired with more ambition than one whose abode is in tenement houses, which can have no attraction to any man or his family. The system of separate dwelling-houses for every family is in itself promotive of greater morality and comfort, and the opportunity of poor men to secure the ownership is an honorable incentive to industry and frugality."

Another important question in determining location, is that of

TAXATION.

It is one of the vital, living questions that is always claiming and always receiving public attention. No state, no community of people, can claim repose from its exactions, while all admit and cheerfully acquiesce in its necessity. Its burdens should be so distributed as to bear equally on all in proportion to their ability to pay, and the law should, as far as possible, be free from all obnoxious features, for no revenue law can be successfully administered unless it has the approval of those over whom it operates. A revenue law must needs be strong and penal to insure prompt obedience, and where reasonable opportunity is given for its observance the penalties are voluntarily accepted as proper and necessary. But if its provisions are believed to have an unequal applications to persons, or the property to be taxed, or the taxing of property which by common consent should be exempted, as cemeteries and property held for charitable or public purposes, such provision cannot be enforced without just protest, and which in time will array such opposition as to secure their abrogation. In taxing this character of property, the constitution of the State of Missouri is at fault, and a proposition to amend the same in this regard, would, doubtless, be favorably received by the people of the State.

The late revenue law of this State makes no exemption whatever of personal property from local taxation, as was formerly the case. Persons long accustomed to the exemption of \$300 worth of personal property, small tax-payers, who have regarded this slight concession from the taxing power as a kind of vested right, will be slow to appreciate the necessity for the change. The revenue expected from this source had better be derived by increasing the per centum.

I come now to the direct proposition of contrasting St. Louis with a few other principal cities with regard to the annual amount of taxes paid for all purposes in proportion to the assessed valuation of the property, and also in proportion to population, as based upon the United States census of 1870.

The assessed valuation of the property of St. Louis for taxes of 1871, was \$158,272,430, which produced for State, county, school, and city a total revenue of \$3,905,366.23; collected on merchants' license in lieu of tax on property, \$312,247.26; making total amount derived from tax on property or its equivalent \$4,217,613.49; equal to \$13.56 for each of her 310,864 inhabitants.

The assessed value of the property of Chicago for 1870, the year before the fire, was \$275,986,550; the amount collected on said assessment, \$6,419,430.57; equal to \$21.43 for each of her 298,977 inhabitants. There was, in the same year, paid in the shape of a special tax, \$2,836,852.48; making of general and special taxes the total of \$9,256,333.05.

The assessed value of the property of Cincinnati for 1871, was \$180,371,932; amount of revenue required at the rate per centum levied, \$4,061,958.86; equal to \$18.78 for each of her 216,230 inhabitants.

The assessed value of the property of the city of New York, in 1872, was

\$1,104,098,087, which at rate per centum levied, \$2.90 on the \$100, would produce \$32,018,844.52; equal to \$33.97 for each of her 942,292 inhabitants.

The assessed value of the city of Philadelphia, for the year 1872, was \$511,024,682; amount of revenue expected from same, \$10,314,870.45; equal to \$15.30 for each of her 674,022 inhabitants.

The assessed value of the property of the city of Boston, for the year 1872, was \$782,724,300; amount of revenue required on said assessment, \$7,987,874.31, equal to \$31.88 for each of her 250,526 inhabitants.

The assessed value of the property of the city of Baltimore is \$216,064,142, amount of revenue collected on same in 1872, was \$3,074,187.34; equal to \$11.50 for each of her 267,354 inhabitants.

The system of special taxes is quite similar in the several cities; in very nearly all of them, streets, sewers, etc., are paid for by taxing the property on the line of the improvements.

It will thus be seen that whether in proportion to the value her taxable property bears to the amount of revenue required, or to her population, St. Louis makes a most favorable showing. Many of the cities laying large claims to business and population are taxed on a full valuation of their property from 5 to 7 per cent.

The great city of New York, which in addition to her own immense wealth, taxes over \$35,000,000 of non-resident capital, speaking through her Mayor in a late message, says: "Taxation rates must increase yearly. The reformer is not born who can hereafter even keep them under three per cent. In five years hence tax-payers will look back and comparatively wonder at the present complaints.

It may be safely assumed that no city of importance in the West is more lightly taxed than St. Louis, and with judicious management public enterprises may be liberally continued without necessarily increasing the public burdens.

It would seem that the capitalist, mechanic and laborer, remunerated as they have been in the past in St. Louis, have reason to hope for still better things in the bright promise that awaits her.

SAM'L PEPPER.

THE HEAVY TAX-PAYERS OF ST. LOUIS.

The following list of names, comprise 400 tax-payers in the city of St. Louis, who pay on assessed valuations of \$50,000 and upwards. The valuations on which assessments were made are set opposite the name of each tax-payer given. And the aggregate amount of taxable property on which these 400 citizens pay is \$60,103,860, which makes an average of a little over \$250,000 to each of the foregoing tax-payers.

The assessed valuation, as given below, is only about sixty per cent. of the current value of the property represented. Besides the list does not contain the names of most of our merchants, for the reason that they pay a license tax on the highest amount of merchandise held by them, between the first Monday of March and the first Monday of June of each year. This tax is equal to that

on real estate in lieu of an *ad valorem* tax on the capital invested in their business. Therefore a merchant employing a million of dollars in his business but not having \$50,000 worth of property outside of it, does not appear in the list below. It is on this account that merchants of St. Louis who represent large capital do not appear on the list.

Alexander, B W.....	\$237,960	Biddle, Jas S.....	65,670
Allen & O D Filley.....	58,810	Biddle, Wm S.....	91,570
Allen, Thomas.....	1,113,830	Bircher, Rudolph.....	183,250
Ames, Henry.....	118,630	Bissell, James.....	89,050
Ames, Catharine.....	106,840	Bissell, Lewis	233,440
Ames, Henry S, Edgar, Mary & Adah S.....	210,720	Blaine, Annie.....	67,560
Ames, Lucy V.....	71,690	Blaksley, Henry.....	166,920
Anheuser, Eberhardt, & A A Busch.....	51,530	Blood, Sullivan.....	57,460
Armstrong, D H.....	164,850	Blow, Eliza A W & Charlotte T Charles.....	56,000
Ashbrook's, Levi est.....	51,490	Blow, Henry T.....	182,950
Aull, Robert.....	95,500	Bobb's, Mary H est.....	57,110..
Backer, Mathias.....	50,030	Bogy, Louis V.....	69,130
Bailey, Elizabeth S.....	59,820	Boswell, Jane.....	112,220
Bailey, Geo.....	100,320	Boyce, Octavia.....	702,910
Baker, John.....	245,650	Brant, Sarah H.....	216,870
Baker, Levin H.....	283,250	Bredell, Edward.....	229,370
Baker, Robert.....	276,900	Bridge, Hudson E.....	270,200
Ballentine, Wm.....	96,090	Britton, Jas H.....	175,390
Barclay, Mrs. M. M.....	186,560	Brotherton, Marshall.....	137,390
Barlow, S L M.....	72,920	Brown, Joseph.....	332,030
Barnes, Rob't A.....	277,570	Brown, Wm H.....	62,820
Barry, Jas G.....	101,640	Bryan, Edmonia T	103,130
Barton, Bates.....	141,900	Bernard, Calvia F & Reilley..	64,400
Beach, John H.....	51,220	Buschman, Fred.....	51,860
Beardslee, Chas <i>et al</i>	68,150	Cabanna, Sarpy Carr.....	113,030
Beauvais, Rene.....	115,210	Campbell, Robert.....	665,910
Benoist, Conde L.....	233,080	Carlin, Delphy.....	64,690
Benoist, Ester A.....	69,270	Carnegie, Andrew.....	54,530
Benoist's, L A est.....	389,670	Carpenter, Jas M.....	54,890
Bent, Silas.....	51,690	Carr, Dorcas.....	110,990
Benton, Wm H.....	231,610	Causey, Peter F.....	142,750
Berthold's, B est.....	426,430	Chambers, Thomas B.....	88,340
Biddle, Annie E.....	172,430	Charles', Robert est.....	60,000
Biddle, Catherine E.....	237,960	Chouteau, Chas P.....	177,260
Biddle, Edward J.....	53,810	Chouteau, G J.....	93,370
Biddle, Eliza N	84,300	Chouteau, G S.....	319,150
Biddle, Hannah S.....	89,860	Chouteau, Mrs Lelia.....	97,950
Biddle, James.....	101,730	Chouteau, Noebert S.....	111,580
		Chouteau, Pierre.....	252,960

Chouteau, Pierre jr.....	183,090
Chouteau, Harrison & Valle..	150,710
Christy's, Andrew est.....	89,820
Christy, Ellen P.....	59,200
Churchill, S B.....	160,300
Clark, Beatrice.....	92,570
Clark, Chas J.....	53,079
Clark, Eleanor A.....	93,900
Clark's, J J est.....	51,700
Clark, Jefferson K.....	65,570
Clarke, Wm G.....	223,810
Clayton, Ralph (MD).....	89,000
Clemens, Jas Jr.....	321,840
Coleman, Sarah L.....	214,600
Coles, Edward.....	168,340
Coles, Mary.....	97,050
Collier, John F.....	178,730
Collier, M D.....	203,070
Collier, Sarah A.....	326,760
Collier, Wm B.....	214,730
Collins, Esther.....	265,940
Conzelman, G.....	150,630
Copelin, John G.....	255,660
Copp, Samuel.....	70,340
Corcoran, W W.....	77,430
Corwith, Henry.....	63,270
Coste, Felix.....	60,440
Cotting, Amos.....	100,200
Crapster, John.....	56,120
Crittenden, Elizabeth.....	181,160
Crow, Wyman.....	74,800
Daggett, John D.....	101,780
Dameron, Logan D.....	370,140
Davis, Sam'l C.....	74,000
Day, F O.....	98,860
Deaven, Fanny M.....	79,830
DeBar, Benj.....	66,400
DeMenil, N N.....	158,830
DeMunn, Isabel.....	102,290
DeNoue, Eliza.....	220,030
DeThury, Ann B.....	209,840
Dickson, Chas K.....	125,940
Dickson, Mary T.....	92,290
Dillon's, John est.....	55,080
Dillon's, P M est.....	243,790

Dorris, Geo P.....	172,120
Dougherty, Jas S.....	70,060
Douglas, John T.....	55,860
Dyer, C C.....	86,780
Dyer, Corinne & John N.....	94,430
Eads, Jas B.....	325,620
Edgar, Tim B.....	63,500
Elleard, Chas W.....	71,810
Erskine, Green.....	175,250
Espenschied, Louis.....	87,510
Ewing, Esther.....	76,230
Ewing, Wm L.....	236,740
Fallon, Wesley.....	76,880
Farrar, James S.....	69,580
Farrar, John O F.....	133,290
Farrington, S S.....	51,690
Ferguson, John L.....	118,520
Ferguson, Nancy M <i>et al</i>	69,000
Ferguson, Wm F.....	127,820
Field, G B.....	60,970
Filley, Giles F.....	192,470
Finn, John.....	77,200
Finney's, John est.....	58,690
Finney, Mary Ann.....	56,770
Finney, Thos M.....	83,890
Flournoy, John.....	62,250
Forsyth, Robert.....	119,910
Franciscus, Jas M.....	60,670
Frost, Eliza G.....	161,920
Gale, Daniel B.....	63,440
Gamble, David C.....	92,910
Gamble, Louisa B.....	109,260
Gantt, T T.....	100,930
Gardner, Thomas.....	74,330
Garrison, Dan R.....	91,230
Gartside, Joseph.....	201,150
Gaty, Samuel.....	264,080
Gay, Edward J.....	638,470
Gay, John H.....	193,030
Gay, Wm T.....	107,510
Gay, Edward J & Wm T.....	71,800
Ghio, John B.....	134,580
Gibson, Charles.....	126,460
Giddings, Fred S.....	101,580
Givens, James.....	57,130

Glasgow, Wm' H.....	151,830	McCausland, Robert.....	75,000
Glasgow, Wm H Jr.....	171,330	McCreery's, P R est.....	207,770
Goodfellow, Mary.....	64,520	McCune, John S.....	365,750
Goodwin, Aaron S W.....	58,910	McDowell, Elizabeth.....	137,500
Gordon, Annie E.....	153,750	McKnight, John.....	77,230
Gordon, Annie E & R C.....	184,030	McLaren, Charles.....	72,480
Graham, Catharine.....	549,190	McLean, James H.....	187,140
Grant, U S.....	73,630	McNeil, John.....	53,870
Greely, C S.....	78,340	McPherson, William M.....	294,650
Greene, Theo P.....	58,830	McPherson & Shepley.....	142,630
Gregory, William.....	54,040	McRee, Mary.....	383,010
Griswold, W D.....	101,190	McQueen, Wm. N.....	66,030
Grone, Henry.....	62,880	Maffitt, Julia.....	223,880
Harding, R E.....	67,310	Maguire, John.....	117,690
Hardy, Jas A.....	55,730	Martin, Meredith.....	92,460
Hargadine, W A.....	66,330	Mead, Lucien.....	55,380
Harney, John M.....	276,720	Meier, Adolphus.....	111,360
Harney, Wm S.....	573,480	Mellan's, Thomas est.....	62,280
Hart's Jas T est.....	55,800	Miller, Mary C. G.....	50,140
Hart, O A.....	127,470	Miltnerberger, Eugene.....	114,500
Haycraft, Eliza.	111,110	Mincke, Geo.....	99,670
Heitkamp's, F J est.....	101,720	Mitchell, R. & W.....	68,950
Hepburn, Susan P.....	79,300	Moore, Henry J.....	79,170
Hiemenz, Jacob S.....	62,270	Morgan, Chas.....	55,430
Hitchcock, Margaret D C.....	217,260	Morrison, Berenice.....	222,840
Hitchcock, Mary C.....	258,790	Murdock, Dickson & Eads.....	108,190
Hodgman, Joseph.....	139,440	Murphy, Joseph.....	148,890
Holmes', Robert est.....	85,780	Murrin, Sarah E.....	108,810
Hoppe, Charles.....	54,710	Nicholson, David.....	353,190
Hoyles', George est.....	125,190	Nulsen, John C.....	254,920
Hudson, Eliza B.....	64,920	Obear, E. G.....	105,750
Hunt, Anne L.....	1,382,560	O'Fallon, Benj.....	306,800
Hunton, Logan.....	80,000	O'Fallon, Caroline.....	292,150
Jaccard's, Eugene est.....	217,050	O'Fallon, Henry A.....	316,290
Jacobs, George R.....	77,100	O'Fallon, James J.....	384,060
January, D A.....	107,940	O'Fallon, John J.....	352,820
January, Jesse C.....	71,690	O'Neil, Joseph.....	82,980
Johnson, John B.....	53,250	O'Reilley, Helen R.....	65,190
Jones, Charles.....	77,180	Parks, Robert M.....	87,910
Kaiser, Joseph A.....	72,840	Partridge, Geo.....	114,440
Kayser, Eloise P.....	57,940	Patchin, L W & Mary D.....	328,400
Kayser, Henry.....	91,390	Patterson, H L.....	126,250
Lucas, James H.....	3,272,300	Patterson, Winnefred.....	175,850
Lucas & Hunt.....	128,330	Paul, Adolphe.....	254,920
McCabe's, E H est.....	53,270	Payne's Mary est.....	97,390

Peck, Chas H.....	145,580	Schaeffer, Nich.....	254,140
Peck, Chas H & J W.....	91,370	Schaumburg, Orleans C.....	91,830
Pendleton, Mary A.....	122,870	Schefer, Walter.....	76,960
Peper, Christian.....	108,510	Schnaider, Joseph.....	52,780
Perry's Ann M est.....	71,500	Schulenberg & Boeckler.....	135,390
Peters, Ann M.....	65,840	Scott, Leanna L.....	160,340
Pettis, Caroline R.....	59,140	Sellew, Ralph.....	100,020
Peugnet, Virginia L.....	115,050	Shamburg, Garson.....	59,710
Philibert & Branconier.....	51,990	Sharp, F C.....	82,570
Phillips, Eugenia C.....	119,370	Shaw, Henry.....	909,280
Picot, L G & M W Willis.....	69,680	Shelton's, John G est.....	62,960
Pierce, Andrew Jr.....	98,750	Shepard, Elihu H.....	65,780
Piggott, Austin.....	52,500	Shepley, John R.....	102,990
Pitcher, Henry.....	59,270	Shickle, Harrison & Howard	52,390
Plant, Geo P.....	97,460	Shreve's, Henry M est.....	111,890
Plate, Olhansen & Co.....	55,630	Sickles, Susan E.....	55,270
Polk, Trusten.....	71,010	Sire, Rebecca W.....	57,190
Pomeroy, Geo.....	77,200	Slevire, Bernard.....	85,820
Pope, Caroline.....	323,920	Slevire, Thos & Chas.....	53,050
Porter, Marg't B.....	110,910	Smith & Partridge.....	52,730
Pratte, Bernard.....	278,960	Smith, Irvin Z.....	63,670
Price, Enoch.....	75,230	Smith, James.....	108,420
Price, Thomas L.....	70,300	Smith, Thos.....	78,760
Price, Wm M.....	88,180	Smith, Virginia M & E B.....	74,140
Priest, John G.....	53,280	Soulard, Benj A.....	158,550
Provenchere, Ferd.....	77,820	Soulard, Hy G.....	311,950
Pullis, T R & Bro.....	51,220	Speck, Chas.....	100,350
Randall, J M.....	62,000	Staehlin, Chris'r.....	193,130
Rankin, John H.....	76,840	Stagg, Hy.....	56,940
Rannells, Chas S.....	85,280	Stanard, E O.....	78,170
Rice's John est.....	95,730	Stansbury, Geo L & Grinsby	54,500
Ridgeley, Stephen.....	54,100	Stickney, Benj.....	105,320
Riggio, John.....	77,140	Stoddard, Asa P.....	78,670
Riggs, Geo W Jr.....	59,880	Strother, Theodosia.....	111,480
Riggs, Lawrason.....	77,680	Sutton, Jas C.....	94,160
Roe, John J.....	170,700	Sweringen, Martha J.....	270,710
Roe's John J est <i>et al</i>	84,950	Switzer's, A G est.....	78,370
Roger's W E est.....	72,410	Switzer, Wm N.....	1,394,820
Rose, Doct Edward.....	53,090	Tamm, Jacob.....	98,080
Russell, Adeline.....	56,150	Taylor, Dan G.....	62,880
Russell, Lucy B.....	53,570	Taylor, Geo R.....	436,040
Rutherford, Thos S.....	170,920	Taylor, Wm C.....	133,420
Salorgne, Theod.....	57,410	Tholozan, Adele.....	64,140
Sanford, Benj C.....	209,860	Thomas, Antoinette.....	97,440
Sarpy's, Peter A est.....	62,650	Thomas, Jas S.....	152,740

Thomas, John S.....	67,610	Vogel, John C.....	83,390
Thompson, Wm H.....	57,850	Von Phul, Henry.....	186,680
Thornton & Pierce... ..	65,110	Waterman, A M <i>et al</i>	105,130
Tiffany, Dexter P <i>et al</i>	136,900	Waddingham, Wm.....	60,800
Tiffany, Hannah K.....	111,810	Wainwright & Co.....	74,580
Tiffany, D P.....	85,810	Walker's Isaac est.....	249,580
Tiffany's, Dexter P est.....	90,010	Walker, Isaac H <i>et al</i>	88,620
Tilden, John.....	95,410	Walker, Thomas A.....	131,060
Tifford, Wm H.....	57,100	Walsh's Edward est.....	314,470
Todd, Albert.....	128,900	Ward, Patrick.....	71,000
Todd, Chas.....	85,090	Wash, Eliza L.....	84,610
Tolle, John F.....	69,630	Weil, Joseph.....	224,190
Tower, Geo F.....	50,460	Wells, Erastus.....	60,220
Towner, M M.....	50,250	Wetzel, Z F <i>et al</i>	73,250
Turner, Henry S.....	184,780	Whittaker, Francis.....	57,860
Tutt, Thos E.....	87,770	Whittaker, John & James.....	61,650
Tyler, Mary L.....	1,027,580	Whittemore, R. B.....	66,710
Ubsdell, John A.....	154,900	Wickham, John.....	65,310
Uhrig, Joseph.....	234,000	Wilgus, John B.....	54,040
Ulrici, Rich'd W.....	136,150	Willi, Sam.....	93,150
Updike & Kehler.....	66,570	Williams, Olly.....	75,440
Valli, Aglae.....	64,840	Winkelmeyer, Christina.....	255,040
Valli, Amadie.....	130,210	Withnell, John.....	123,460
Vandervoort, Mary.....	97,720	Woesten, Fred.....	61,090
Van Studiford, Henry.....	159,970	Wood, James.....	116,720
Vogel, John.....	66,310	Yeatman, Lucretia.....	85,890

In addition to the above facts, the total assessed valuation of the property of St. Louis for 1872 is \$162,689,570, and the total assessed valuation of the County of St. Louis for 1872, is \$200,318,410, which is an increase in one year of about \$4,500,000 in the growth of the city, and over \$5,000,000 in the growth of the county of St. Louis.

THE ST. LOUIS AND MERAMEC HARBORS.

PROTECTION FOR OUR STEAM MARINE.

THE COMMERCIAL INTERESTS OF THE MISSISSIPPI VALLEY.

Proposed plan for Boat Harbor, U. S. Ship Yards and Dry Docks.

WHERE TO BUILD OUR IRON STEAMBOATS AND BARGES.

Taught by an experience of more than a half century, that has been both destructive and embarrassing to the commerce of St. Louis, it seems that no further time should be lost for not only devising, but making some improvements that will render the harbor of St. Louis a place of security for steamboats, and commerce during the winter season. To prevent any further destruction of property by the formation and drifting of ice in the harbor seems to be a matter of great concern, and ought not to be neglected another season.

As to the necessary improvements to make the harbor a place of security for vessels during the winter, is a question for engineers and steamboatmen to determine. It is thought by some experienced steamboatmen to be a matter that will require but little expense or engineering skill as only the construction of a dyke a few miles above the city, from the Illinois shore toward the centre of the river, would be necessary so as to narrow and deepen the channel, and compel the ice to gorge above the harbor, instead of in it as heretofore.

If this simple improvement is sufficient, it ought to be made before another winter comes. Besides the improvement of the harbor it has been wisely proposed that the mouth of the Meramec be improved for commercial and manufacturing purposes. The proposition for the improvement of the mouth of the Meramec was first made by Dr. Vanzandt, of this city, who is keenly alive to all the advanced interests of St. Louis, and as he has so ably discussed the subject, we cheerfully give place to his own views, as follows:

All who have given the matter a second thought must be convinced that the commerce of the Mississippi river is to increase regularly and rapidly. The Mississippi river and its tributaries form a great system of navigable waters, probably not less than 20,000 miles long. In the language of the late Col. Benton — connected with seas by the head and the mouth, stretching its arms towards the Atlantic and the Pacific, lying in a valley which is a valley from the Gulf of Mex-

ice to Hudson's Bay ; drawing its first waters, not from rugged mountains, but from the plateau of the lakes in the center of the continent, and in communication with the sources of the St. Lawrence and the streams which take their course North to Hudson's Bay ; draining the largest extent of richest land, collecting the products of every clime, even the frigid, to bear the whole to market in the sunny South, there to meet the products of the entire world. Such is the Mississippi ; and who can calculate the aggregate of its advantages and the magnitude of its future commercial results ? This great river will never be superseded by railroads. The genius of man is not yet exhausted, and the obstacle that stands like a sentinel at the mouth of the Mississippi, exacting toll from all our river commerce will be removed, and the commerce of the Great Valley shall flow unimpeded to the Gulf. Not only are measures already adopted for increasing the number and improving the character of our barges for freight transportation, but a company has been formed for building iron passenger steamers, propelled by low-pressure engines, which will make the trip between St. Louis and New Orleans in sixty hours — thus competing with railroads.

St. Louis is the natural, geographical and commercial center of the entire system of navigation of the Mississippi Valley, and will continue to be for all time.

Steamers and barges from the Mississippi and all its navigable tributaries concentrate here. What has St. Louis done for the protection of these boats from the destruction by ice or fire ? Absolutely nothing !

The writer was one of the many sad thousands who stood upon the levee in the winter of 1865, when seventeen steamers were either totally destroyed or seriously damaged, by the resistless force of the floating ice. The annual report of the Union Merchant's Exchange, for that year, thus alludes to this event :

"On the fifteenth of December, 1865, occurred one of those terrible steam-boat accidents which have become of yearly occurrence. Several steamers were more or less damaged, some of them a total loss. By the 18th, foot passengers were crossing on the ice, and by the 21st, the ice was strong enough for loaded teams, and so continued to the end of the month. The river opened by the breaking up of the ice, on the night of the 12th of January, and, as always happens, destroyed an immense amount of shipping."

This is the record of but *one* winter, and though, perhaps, more severe than usual, who can say at the close of navigation that we shall not before spring suffer still greater losses from ice than ever before ?

Immediately after these disasters our river men and underwriters make a spasmodic attempt to devise some plan to secure our shipping from similar disasters in the future, but thus far nothing whatever has been accomplished, no plan suggested, and as far as is known, the subject has been dismissed from the minds of our river and commercial men, until they are again aroused from their lethargy by another similar disaster.

Witnessing that sudden destruction of valuable steamers, an impression was made upon my mind that cannot be obliterated. The question in my mind then and ever since has been, "How can our steam marine be protected from liability to destruction in the winter season by ice and fire?" After thoroughly investigating the subject, I submit the following as a plan for a basin and dry docks, which may be constructed ready for use at a cost far less than the loss to our steam marine during the past ten years.

PLAN FOR A BASIN AND DRY DOCKS.

A dam, twenty-five feet high, will give a basin or harbor half a mile wide, and about three miles long, covering an area of between 700 and 1000 acres. The depth of water in this basin, will be from ten to fifteen feet, over the alluvial bottoms, and in the channel, from eighteen to twenty-five feet. The basin to be reached through a canal one mile long, along the bluffs, having two locks of $12\frac{1}{2}$ feet lift each. Here would be a safe and convenient harbor, where boats would be entirely out of danger from ice, and have ample room to be at safe distance from each other, in case of fire; so the loss of one would not involve the destruction of several, as has been the case in several instances, on our crowded levee.

WHY SHOULD THIS IMPROVEMENT BE MADE

1. It is a necessity now, and the necessity will increase annually. There are now enrolled in this city 150 steamers and 245 barges, valued at over \$6,000,000. Not only are the owners of this shipping who have six millions of dollars invested, deeply interested in having a safe winter harbor for these boats and barges, but every city and town on the Mississippi and its tributaries is directly interested in this great project. Boats are frequently obliged to go into winter quarters here that are owned at various other ports, and the owners are interested in having them in a safe harbor. Besides this, the loss of one steamer, or a dozen, reduces the shipping facilities to that extent, and it is a loss that is seriously felt by the business men wherever those boats have been running. We do not know what to do with our steamboats and barges *now* in the winter season, how much greater will be the necessity for a safe harbor five years hence, when our steam marine shall have increased probably four-fold its present magnitude?

2. The time is rapidly approaching when the center of power of the American continent, commercially and politically, will be in the Mississippi Valley. *Then* the Government will see the necessity of establishing at this point extensive ship-yards for the building of her ocean steamers; for surely there is no other point where they can be built as economically and be so easily floated out in the spring, on twenty feet of water.

3. The steamers and barges for our Western rivers will soon be built of iron,

and this is the best location in the United States for extensive boat-yards and dry-docks, convenient to the iron works at Carondelet, surrounded by an exhaustless supply of all the materials needed, with ample water power for any desired purpose.

4. With extensive dry-docks here, boats could be overhauled and put in thorough repair during the winter season; whereas now, when a boat is ice-bound and tied up along our levee, if fortunate enough to escape destruction by ice or fire, and needs repair, she must lose two or three trips in the spring, while on the docks, and at the very time when trade is brisk and freighting most profitable.

5. The bluffs on either side of the basin contain excellent varieties of building stone, and all the materials required to construct the dam and locks are at hand. This improvement is needed now, and the necessity for it increases annually. It will cost far less now than ever hereafter.

WATER POWER.

6. The water power afforded is an important consideration. The fall in the canal will be twenty-five feet. Manufactories of various kinds could be established here, and have a cheap, regular, and exhaustless power. By building a second dam, with two locks of twelve and a half feet lift each, and a small canal or race on the Mississippi, a fall of from fifty to sixty feet is secured in a distance of three or three and a half miles, *affording a water power probably unequalled in the world.*

7. The counties drained by the Meramec are remarkably rich in iron, copper, lead, clays and paints, and there is scarcely a limit to the number and variety of manufactories that could be profitably established to work up the minerals that would come down the Meramec, up the river, and by the Iron Mountain Railroad from Southeast Missouri. There are very few portions of the United States where a greater variety of timber can be found, or in greater abundance. Here should be established factories for furniture, wooden ware, cooperage, wagon material, and the thousand articles we are so largely buying from other States.

8. There is not a paper-mill in the State. The water of the Meramec is remarkably clear, and well-adapted for this purpose. Here also should be extensive cotton factories, woolen mills, etc., but why enumerate? With twenty-five feet of fall in one mile along the canal, and fifty feet fall within a distance of three or three and a half miles, the intelligent reader will readily see that the facilities for manufacturing will be unparalleled.

9. A dam (and locks) will, as before stated, raise the water at that point to a height of fifty feet or more above low water mark in the Mississippi. This will render the Meramec navigable a distance of more than one hundred

miles (without any serious injury to the country,) thus affording cheap water communication to the extensive iron works already in operation along that stream, and also for the shipment of the minerals, in which that country abounds.

The Meramec river has laid dormant from the "beginning," and now that "The Future Great City" has extended its limits so near its shores, and a feasible plan has been matured, in the consummation of which this river can be rendered of incalculable importance to the steam marine of the Mississippi Valley, to the boat building interest of the United States, and to the manufacturing interests of this State—the modest Meramec seems to say, "Why don't you harness me in the interest of commerce and manufactures?"

When I review this whole matter, fully understanding the urgent necessity for a safe harbor for the protection of our steam marine, directly connected with which should be the boat-yard and dry-docks; and when I see what facilities and advantages are here afforded for all the purposes above alluded to, it seems as if a kind Providence had located that river for these special purposes, and that it has been revealed to us just when we need it. Should we fail to take advantage of this, and allow our steam marine to be destroyed year after year, the generation that shall follow us, and enjoy the advantages of the improvements here suggested, may very properly censure us for our stupidity. The interests of the Mississippi Valley cannot be ignored, and the *necessity* for proper protection in our shipping must be met.

As indicated above, this is a matter of vast importance to our city, our State, and to the United States. Its completion would prove of incalculable benefit to our commerce; would bring capital and scores of manufactories; stimulate skilled labor to engage in the development of our mines; vitalize the now worthless woods of our vast forests; turn the tide of cotton here for manufacture and sale; and in a thousand ways add to the industry, wealth and productive population of the State. With a full appreciation of the necessity of this matter, shall we let the disgrace of a failure to make this important improvement, rest upon the present generation?

Having no pecuniary interest, whatever, in this great enterprise, and actuated only by a desire to protect and increase our river commerce and stimulate manufactures, I make free to suggest to the Merchant's Exchange and Board of Trade the propriety of appointing a committee from their members to prepare a memorial to our State Legislature and to Congress, demanding appropriations for this improvement; and that copies of the memorial to the Legislature be sent to every postoffice in every river county in this State, to be signed and returned to the Secretary of the Merchants' Exchange; and that the memorial to Congress be sent to the principal shipping points in the Mississippi Valley, to be signed and forwarded to Congress early in its next session.

The commercial destiny of this city, and of the Mississippi Valley is, to a considerable extent, in the hands of the Union Merchants' Exchange and the Board of Trade of St. Louis—composed of the representative men of the "Commercial Metropolis." To these representatives of our commercial interests, I respectfully submit the further consideration of this matter, which, in my humble opinion, is paramount in importance to any other that can claim their earnest consideration and prompt and energetic action.

Very respectfully,

WM. VANZANDT.

THE GREAT BRIDGE NOW BEING BUILT OVER THE MISSISSIPPI, AT ST. LOUIS.

"What a glorious future may we not anticipate for our own St. Louis! Why, sir, I imagine I can see the Oriental traveler, on his brief excursion round the world, pause upon the central span of the Eads Bridge, and, amid a prodigality of gigantic achievements of science and progressive effort, still read in the distant future developments of equal or greater magnitude. He stands upon a structure which rests upon the deep foundations of the earth itself, and presents in its strength and massive grandeur, in its piers of granite and arches of steel, fit emblems of our moral as well as physical structures, the steadfastness and wisdom of our institutions, and the solidity of our industries. Beneath him flows the great Father of Waters, bearing on its bosom the argosies of an empire, while on every hand the evidences of triumphant art command his attention. A city of 1,000,000 inhabitants lies before him, and it may be on one of its ascending steppes the capital of the nation rears its peerless dome. Strange wonders, these, of Time's begetting, and of progressive revolutions! The providential mystery which hid this continent from the knowledge of the civilized world for thousands of years, begins to clear away under the sunshine of facts which surrounds him, and the grand revelation is made that it was reserved for a period when mankind should aim to be fraternal, and the victories of peace should be acknowledged the crowning glories of ambition."—B. R. BONNER.

Each age and each nation produces its great works in some phase of human progress. The early Jews built the tower of Babel; Egypt had the pyramids and Catacombs; Greece her Parthenon and unequalled temples of worship; Rome had her Coliseum; the middle ages their walled cities. But modern civilization, passing beyond the age of selfishness, ambition, and idolatry, gives to mankind magnificent structures of greater use as the triumphs of the genius of the race.

The greatest work of mechanical art that the world has yet beheld is the Crystal Palace of the nineteenth century. It combines in one grand masterpiece of art, and one glow of associated beauty, the highest civilization and progress of man.

The leading feature of the present age is the strife for commercial dominion. In this department of civilization is enlisted more capital, talent, and men than in any other. All the rapid strides of the race are made in its interest—whether in the achievement of art, of science, or of genius. The wild billows of the Atlantic have been defied by steam and electricity, and the two great continents of kindred shores united by these subtle agents; and now with one steady grand march does civilization, carried by the tides of men, continue its journey to the West—to the high mountains, and the broad and calmer waters of the wide Pacific Ocean. With these great movements come the master-works of mechanics and arts.

Since the invention of the steam engine, the railway system may be regarded as the greatest aid to civilization the arts have produced, on account of the rapid

intercommunion of men and ideas, and the exchange of products. But a great and valuable railway system without bridges to cross the inland streams would be an impossibility; hence the remarkable development of genius and art, and the concentration of capital, to construct in ample proportions these master-fabrics for commercial use. Nor are they constructed as the easy work common to the ordinary routine of life. But rather are they, who project great works in advance of the resistless moving times, compelled to contend against a vast array of ignorance, prejudice, and selfishness. Yes, there is one thing common in the history of all great undertakings that have to break a new path: they have to combat against frivolous objections and contempt, and, even in the best cases, against the unsympathetic attitude of the masses. At the same time it must be confessed that these opposing elements have never failed to pass into their opposites, as soon as perseverance, talent, and business energy on the part of individuals have, in spite of them, realized what has once been acknowledged as possible and necessary. In all such cases contempt has been exchanged for admiration, doubt has been compelled to give way; and the more rapidly and victoriously the enterprise, which was once so strongly doubted or even assailed, progresses, the more surprisingly does the number of those increase who would fain have it believed that they stood as prophets of good by its cradle. Such was the case—to confine our examples to American soil—with the Erie canal, with the leveling of Chicago, with the Pacific railroads, and finally with that immense structure which, before the face of St. Louis, is soon destined to span the Father of Waters. This one circumstance might be sufficient to secure the work its proper place among the great feats of humanity in modern times. But such is no longer necessary as an argument; the structure has its days of combat behind it—already its creators can point with silent finger to the actual progress which it has made, and to the point which it has at this moment attained, and allow that which has already been accomplished to speak for that which is yet to be accomplished. And it speaks irresistibly; it tells us not only that the completion of a work which in its line has no peer, is certain, but it tells us also that, as in the case of the Pacific railways, the goal will be reached many a day sooner than the original calculations and pre-suppositions led us to expect.

That the trade of the central portion of the Mississippi Valley, which centers in St. Louis, and advances every year with such gigantic strides, was not sufficiently provided for by the present arrangements for transportation across the broad stream which separates Missouri and Illinois, or, to speak more correctly, the true East and West of the United States, has been known and seen by every one for many years.

Passing from this general allusion to the struggle which enterprise is compelled to wage against established conditions, we at once submit a general statement of the great Bridge under consideration.

The plan of the Bridge, as it is now being built, is quite original in many particulars, and when completed will, in all probability, be superior to any structure of the kind in the world. So great and important is the structure, that a complete description of its main work will not be uninteresting to the

general reader; for the work itself has its lesson as well as its value, and therefore its manner of building, as well as its style of structure, will be of great public interest.

THE PIERS OF THE BRIDGE.

The locality at the river chosen for the bridge is a scene of the strangest and most exciting kind. Along the banks are extensive workshops, heaps of hewn stone, beams, iron-work and cement barrels, forges, offices and sheds for supplies, derricks and other arrangements for hoisting, and pile-drivers, whose construction alone is a sort of miracle, and finally the lofty bridge-scaffoldings, composed of thousands of beams, arms, and parts of iron machines over the shore piers, which are in progress of construction inside of strong caissons. In the midst of the river, 500 feet from either shore, and 520 feet distant from each other, we see the same scaffoldings, only more complicated and more lofty, and, notwithstanding their colossal size, affording an almost elegant spectacle in their wonderful symmetry. Structures of all kinds, and palisades that go down a hundred feet into the river, intended to break the current, and more particularly the floating ice in winter, surround these wonderful constructions that rise from the bosom of the river.

Like the building yards on shore, and even more than these, they are crowded with a perfect bee-hive of engineers and workmen, whose self-conscious ability is infinitely increased by the enormous mechanical powers which stand here ready for use at every step, in the form of floating derricks, steam engines, pumps, and hydraulic jacks. These are the building yards of the two piers. Under these scaffoldings and iron constructions the heavy masses of stone which are intended to carry and hold the three arches of the bridge mostly counterparts of the ponderous structures of the ancient Egyptians, are put together. But how much easier was the task of those ancients, who piled up their edifices in the familiar element of atmospheric air! In our case they had to penetrate into the deeps, but not, like the miner, into the solid element of the earth; they had to break through a volume of water thirty feet deep, and, after arriving at the bottom, to burrow through the sixty and ninety-foot thick layers of treacherous, ever-changing Mississippi sand, in order to rest the basis of the piers upon the eternal ribs of the earth itself, on the rocks of primeval worlds.

The investigations of years in regard to the undercurrent of the Mississippi have shown that no river in the world changes its sand-bed so rapidly and to such an extent; and more particularly the soundings that were made near St. Louis showed that at times, when the river overflows, its sand-layers may be carried away to the depth of forty feet, and, under extraordinary circumstances, scoured down to the very rock itself. This was demonstrated the necessity of laying the basis of the piers upon the rock itself, which under one pier is ninety feet, under the other one hundred and twenty feet, under the ordinary high-water line. Inasmuch, on the other hand, as the law of Congress, made in the interest of navigation, prescribes that the height of the arches shall be fifty feet above the city directrix, or ordinary high-water line of the

river, it results that the entire height of the piers must reach 165 and 194 feet respectively.

The system by which the base is laid upon the rock is that of sinking. On colossal iron caissons (open below and resting upon the sand itself), which, with the increasing weight of the piers built on top of them, and as the sand under them is removed to the upper world, sink deeper and deeper, this lowering is effected. In order, however, to render the caissons—which, in spite of the thickness of their iron walls and their solid construction, might not be able to withstand the pressure of the growing masonry and the masses of sand that press against their side walls—capable of resistance, the atmosphere, by means of enormous air-pumps, is compressed in them in such a manner that their power of resistance can be increased to meet any exigency. When the caisson or air-chamber, as it is called with propriety, strikes upon the rock—that is, when the sand-pumps working it have removed the gigantic layers of sand through which it had to penetrate, and when the pier that rests on the caisson is separated only by the air-chamber from the rock—then it (the caisson) is filled with concrete, which completes the indissoluble connection between pier and rock. When the last particle of compressed air in the air-chamber has given place to this indestructible compound of cement and stone, all that remains to be done is to fill up in a similar manner the perpendicular shafts which communicate between the air-chamber and the upper world, and the whole structure of the pier in solid compactness, incorporated with the rock far below, stands aloft, bathing high above its colossal and yet elegant form in the rays of the sun, out of the floods of the river.

IN THE AIR-CHAMBER.

During the last few months a visit to one of the air-chambers under the piers was one of the principal attractions that St. Louis had to show to visitors. The further the piers themselves advanced—that is, the deeper the air-chamber sunk with its burden—the greater was the compression of the air necessary to render them capable of supporting the immense weight which increased with every inch of sinking, and all the harder was the work inside the caisson. When the air-chamber of the east pier, on the 28th of February last, reached the depth of ninety-five feet under the bed of the river, with a weight of 20,000 tons upon it, the workman who removed the last of the sand had to work under the pressure of three atmospheres; and it was not possible so entirely to avoid all kinds of mishances, as has hitherto been the case, without changing the workmen as frequently as possible. In order to afford a more complete understanding of the matter, we must remark that the introduction of the compressed air into the caisson can be measured with such wonderful accuracy that the sinking can be regulated to an inch. This sinking is accurately calculated according to the quantity of the sand removed from beneath the air-chamber, which is nine feet high. The sand itself is removed by means of powerful pumps, which pump up the sand in great streams after it has been softened and brought in the condition of drifting sand by means of water supplied from a hose, and then driven back to the river from whose depths it had been taken.

As we have already said, a number of shafts passing vertically down the pier effect a chimney kind of a communication between the air-chamber and the upper world. In the central and widest of these was a winding stair-case, which was lengthened as the pier reached downward, and was used for people to pass up and down. The smaller shafts, which also passed down the pier perpendicularly, contained the pipes which serve to introduce the compressed air, the hose for moistening the sand, the pump which removes it, machines for the introduction of materials, and a telegraphic arrangement by means of which the workmen from beneath, "where all things hideous are," are able to correspond every moment with "those that breathe in the rosy light."

The entrance into the caisson itself was effected by means of an air-lock at the bottom of the winding stair-case—a lock which, like the caisson, is constructed of thick iron, and is an integral part of it. As soon as the chamber was entered, which was capable of holding six or eight persons, the current of air admitted rushed round with such impetuosity that even strong organizations entering this kingdom of darkness and night for the first time could not disembarass themselves of a certain feeling of uneasiness. The iron door that led to the outer world pressed firmer against its frame, by the force of the air streaming in, than could be done by a lock or any other contrivance. The stop-cock through which the air streamed in was not closed until the atmosphere in the air-lock had reached the same density as that in the main part of the caisson. As soon as this was the case the door leading into the caisson opened of itself, and we were ready to enter this subterraneous workshop, where even the clearest voice loses its sound, and where, deep under the echo of human speech—yea, deep under the water's undermost depths—busy workmen pave the way for the sinking pier.

For a while one felt perfectly comfortable in this underworld—a world such as no mythology and no superstition ever dreamed of. The transition, indeed, became apparent by pain in the ears, bleeding at the nose, or a feeling of suffocation; but these inconveniences and seeming dangers, inevitable upon such a visit to hell, were insignificant in comparison with the interest which it offered. It was undertaken by hundreds and hundreds of visitors, including many ladies, and none returned from that depth without carrying along with them one of the most remarkable reminiscences of their whole life. Shrouded in a mantle of vapor labor the workmen there, loosening the sand; dim flicker the flames of the lamps, and the air had such a strange density and moisture that one wandered about almost as if he were in a dream. For a short time all this was extremely interesting and delightful, but it was not long before the wish to escape again from this strange situation gained the upper hand over the charm which it exercised. Gladly did the visitor, after a quarter of an hour, re-enter the air-lock, with an unfeigned feeling of relief, to watch the air beginning to escape from this chamber. At once the door behind him leading from the caisson closed by the denser air, and fastened as firmly as if there was a mountain behind it. The compressed element escaped whistling from the air-lock; the air within was more and more equalized with the air without;

a few minutes, and they were of equal density; then the door, no longer pressed against its frame by the dense atmosphere, opened to the winding stairs, and the visitor came forth taking a long breath, and, to use Schiller's words, once more "greeted the heavenly light" which shone from far above down the shaft.

THE BRIDGE WHEN COMPLETED.

At present both the piers may be considered as finished. The east pier has been resting with its caisson on the rock since the 28th of February, and the filling of the chambers was then rapidly accomplished. Its western companion had then only three feet more to sink, and this it might have done in a very short time, but the supply of granite failed to arrive in time, and so interrupted the building itself. It is laid down in the plan that the portion of the piers above water, and exposed to the action of the air, shall be built of the strongest granite, while the parts extending from the rock to a certain point under the lowest water shall be built from limestone blocks from Grafton quarry, in Illinois. When the expected granite arrived, the construction of the piers above the surface of the water made rapid progress, and in a few weeks they will have reached the prescribed height of fifty feet above the water level. Their total height, or, if you prefer it, their total depth, will then, as stated above, be 194 and 165 feet respectively—the east pier being the highest, because the rock on the Illinois side of the river lies deeper than it does on the Missouri side. The hexagonal foundation of the piers is 82 feet in length; their weight amounts to from 28,000 to 33,000 tons. No less solid and massive is the construction of the abutments. In their case, likewise, they had to go down to the rocks. Upon the Missouri side of the river this presented little difficulty, which, however, will be made up for on the Illinois side, on account of the nature of the American bottom. On this side the works are already advancing, inside a gigantic coffer-dam, towards the surface. On the other side they are just being begun. We know, however, that in the character of this work a beginning is the beginning of a certain, and particularly of an early, termination. It will therefore not be long before the Illinois abutment will rapidly follow its *vis-a-vis* and the two piers.

These four piers will form the substructure which now approaches its termination with rapid strides. Upon the masses thereof, which are put together to last for an eternity, the bridge itself will rest, which is destined to facilitate the proudest inland commerce over the proudest of streams. They will carry three arches, which, as was already remarked, will measure—those extending from the abutments to the piers 500 feet each, and the span of the principal arch between the two piers 520 feet. The possibility of erecting such long spans, considering the enormous weight which they will have to bear, was at first strongly doubted, and still more strongly contested. Captain Eads, however, sustained on the one side by his calculations, on the other by the example of the arched bridge at Kulinburg, in Holland, which spans the Leek with a span of 500 feet, as well as by the plans of the English bridge-engineer

Telford, which were made in the beginning of this century, was enabled to invalidate and set aside all these objections. Cast-steel is selected as the material of these arches. Each of them will be double, that is to say, will consist of two concentric arches 12 feet apart, and joined together by a network of the most massive steel braces. Such double arches will be stretched four in each span, running parallel with each other from pier to pier. Upon their iron necks will be laid the real bridge in two stories. The lower of these stories is intended for the railways; the upper belongs to vehicles and foot passengers. Being fifty feet wide, both will afford space enough to satisfy the demands of the liveliest traffic. Meanwhile, underneath, the largest steamers, even when the water is at its highest, may dash along; and while over them the East and West exchange their riches, they may, unimpeded, perform the exchange between the North and the South. St. Louis, however, will not only have the boldest arch bridge in the world, but it will also have the first structure of the kind built of steel, the true noble metal of our times. Let us leave to Europe her Krupp and her arsenal full of cast-steel cannon—the one steel bridge over the Mississippi casts into the shade all that equivocal wealth of the old world.

It remains to say a few words in regard to the shore structures, or, more properly, to the approaches to the bridge. The street leading directly to the bridge—Washington avenue—is one of the broadest and finest in St. Louis. Like the whole of the St. Louis shore, it slopes rapidly when it approaches the river. It will be sufficient, therefore, to prolong the bridge, which rises about fifty feet above the shore, a comparatively short distance—three blocks—1,049 feet into the city, in order that its level may equal that of Washington avenue. A viaduct of five arches, of twenty-seven feet span each, under which the traffic of the cross streets below may be carried on unobstructedly, will form the continuation of the bridge, and of course will be of the same height and breadth. At the end of it the high level road will pass into Washington avenue, which still continues to rise, whereas the low level road, with its railways, will run into a tunnel, 4,800 feet in length, which passes under a large portion of the city, and terminates at the spot where the great St. Louis Central Railroad Depot will be erected—where at present the Pacific railroad crosses Eleventh street. The tunnel will be fifteen feet wide and seventeen feet high. By means of soundings and borings it has been ascertained that there are only layers of clay to be tunneled through, and therefore the latter portion of the enterprise will offer no particular difficulties. With the approach to the bridge over the flat marshy ground on the Illinois shore, the company itself has nothing whatever to do. Dykes and trestles, branching off according to the convenience of the different railroad companies to north, south, or east, will complete the connection with the bridge. The upper carriage-way will be carried out upon solid constructions as far as Fourth street in East St. Louis, from which point the Missouri traffic will divide up in all directions.

And now, what will this gigantic work—measuring from the Illinois abutment to Washington avenue, in St. Louis, 2,230 feet—cost? We put down the estimates for the different parts, as well as for the whole structure:

Superstructure (piers and abutments).....	\$1,540,080 00
Superstructure (arches and roads for traffic).....	1,460,418 30
Approaches.....	520,397 24
Tunnel.....	410,477 55
Expropriations.....	539,900 00
Railroad	25,680 00

Total expense of bridge.....\$4,496,953 09

Of this capital, three millions (\$1,200,000 in St. Louis, the rest in New York) have already been subscribed, and the outlay up to the present moment is \$1,700,000. At the same time the financial management has hitherto been so successful, and the different contracts made so advantageously, that the progress of the bridge will certainly not be interrupted by any pecuniary difficulties. No less certain is it that advantage will be taken of the work as soon as it is completed. The data which have been made and collected with extreme care in regard to this point by one of the directors, Dr. William Taussig—who must be considered one of the most energetic promoters and patrons of the great national enterprise—lead to the following results :

At least thirteen railroads will have their terminus on the Illinois shore of the Mississippi in East St. Louis. And at least eleven railways will soon leave St. Louis itself, cutting the State of Missouri in all directions. Of only three of all these have we any statistical reports, and these relate only to the freight traffic of the year 1867. They show that during that year 767,400 tons of freight were carried over these lines. The most modest estimate of the traffic of twelve railways, which will be the total number finished and in operation before the completion of the bridge, cannot place it below a million of tons. The contracts already made with the different railway companies, and those still to be negotiated, secure to the Bridge Company an average tariff of 65 cents a ton, which would yield a yearly revenue from freight alone of \$550,500. The remaining traffic (horse-cars, coal carts, farmers' wagons, and other freight conveyances, along with cattle transport), according to present estimates, may be reckoned at \$129,647, and passengers on the railways \$112,000, so that altogether the total revenue would amount to \$892,147. From this sum \$40,000 must be subtracted for annual incidental expenses, and there will remain over a sum equal to eight and a half per cent. on a capital of ten millions.

It is expected that the bridge will be inaugurated in the last days of next year. However, if we may draw a conclusion from the past favors of fortune upon the work, the latter part of the summer of 1871 will see the first train of cars pass over the steel and granite structures of this unrivaled bridge. Then it will not only be a source of pride to every Missourian in particular and every American in general, but its massive and yet magnificently elegant forms will be a source of astonishment to the ordinary spectator and of admiring appreciation to the professional engineer. Then likewise will be brilliantly verified the words with which the architect closed the report which he laid before the company in the spring of 1868, and which are as follows :

"It is safe in stating that rarely has an enterprise been inaugurated which appeals so strongly to the support of our citizens of all classes, which promises

so much to add to the welfare and prosperity of the city, and which offers such a safe and remunerative return for the labor and capital invested in it."

At the present time the west pier is sunk to the rock, and the air-chambers of both piers, and the shafts in them, have been filled up with concrete; and the masonry has been carried up to about six feet above low-water lines. The caisson for the east abutment is being built at Carondelet, and will be launched about August 10th of this year.

The west abutment has also been built up to about twelve feet above low-water, and by February 1st of next year all the masonry of the piers will be ready for the superstructure. The contract for the superstructure has been awarded to the Kingston Bridge Company, of Pittsburg, Pa., and that company is now working in the most urgent manner to fill their contract, which obliges them to furnish and raise the superstructure of the bridge within seventeen months. A notable feature of this contract consists in the fact that it has been let at prices below those estimated by the Chief Engineer.

This constitutes a brief outline description of the great St. Louis Railway and Passenger Bridge, which is now in process of construction.

A very brief classification of the approved bridges of the day, and an allusion to specimens of the various kinds, will, perhaps, enable the casual reader to receive a better impression of the magnitude of the St. Louis bridge. There are four prominent styles of bridges, which are generally adopted by the engineering profession when they aim to erect something that will endure to remote generations—the tubular, the suspension, the lattice, and the arch—all constructed of iron, in one or more of its forms. The tubular, invented by Robert Stephenson, although materially aided by Fairbairn, will always, we think, be regarded as one of the great ideas of the nineteenth century. It is a straight, hollow, rectangular tube. The Britannia bridge is the grandest specimen; for its longest span or reach, between supports, is 459 feet. But long as it is, it was lifted in one piece 100 feet high, to its present position. The Victoria bridge has no span of equal length, nor was it elevated in the same way.

The suspension, in its crude forms, is of ancient date. It is found in all lands, but until later years it has never received the indorsement of engineers as the reliable support of railway trains; and in this respect it can hardly be said to have thoroughly disarmed sound criticism, when we claim we are building something that is truly permanent. It possesses some qualities that will always render it popular. It can be constructed more easily in many positions. A much greater span can be obtained than by any other known method, and the cost is comparatively less. Perhaps this last feature can be understood when we remember that the Niagara bridge, with a span of 821 feet, was built for less than the yearly interest on the sum expended on the Britannia bridge. Its general construction is well known. In Europe, the prominent specimens are the Menai, by Telford, with a span of 580 feet, and the Freyburg, in Switzerland, with a span of 870 feet. In this country, Ellet and Roebling have identified themselves with the Wheeling, Niagara, Cincinnati, and other bridges. Ellet constructed the Wheeling bridge, 1,000 feet span, which failed to with-

stand the winds; yet Mr. Ellet was a great man. Mr. Roebling may be regarded as the great exponent of the suspension bridge in this country. His reputation may well be envied; for while the great engineers of Europe were declaring it was impossible, he went on with the Niagara bridge; and now, after eighteen years' successful usage, it has caused the engineers of the old world to reverse their theories.

He built the Cincinnati bridge, and if, in future times, the suspension shall have become recognized as a thoroughly safe, permanent structure for railway trains, to Mr. Roebling, more than any other, will the credit belong.

The lattice bridge has been and is now a very popular type of bridge. The name will readily convey a correct impression of its general construction. In some respects it is preferable to the tubular. It is less costly and is less rigid, which some claim to be an advantage. As fine a specimen of this kind, perhaps, as can be seen anywhere, is at Cologne, over the Rhine. Its longest reach is 330 feet. It is, however, liable to oscillation.

But yielding everything to the suspension and the lattice that can with reason be claimed for them, it is questionable whether they possess the elements of perpetuity equally with the arch. We know arch bridges have endured for centuries; we do not yet know how long a railway suspension, tubular, or lattice bridge will continue.

The first cast-iron arch bridge was built in 1779, with a span of 100 feet. Many other iron arch bridges have been successfully constructed. They have always been highly esteemed for their strength and durability. The great drawback, perhaps, has been an inability to construct them with a span so wide as to compare favorably with those of other styles. In England, the largest is the Southwark, with a span of 240 feet and a rise of 24 feet. Note this fact, and remember the length of the Britannia, 459 feet, and the length of the Cologne, 330 feet, and then the importance of the St. Louis bridge, with its span of 520 feet, will appear.

Its form is as enduring as any tested by the experience of ages. Its size surpasses that of any, when we consider the true comparison, the length of span. Its material, cast-steel, is the best in the world, ranking with wrought-iron in the ratio of two to one.

The importance of the St. Louis bridge is still further increased when we consider its foundations, their depth, their mode of construction, and the attendant difficulties.

Other engineers of great eminence have proposed the erection of bridges of greater span than this, but it rarely occurs that the location and conditions of the case justify, as in this one, such bold grasp of mind on the part of the engineer, with the no less accompaniment of a proper manifestation of public spirit on the part of capitalists to carry out his design.

Mr. Latrobe, a noted engineer of Baltimore, has expressed his opinion upon the construction of a bridge at St. Louis. He favored the use of piers higher than those of the present plan, requiring a stationary engine to draw the cars from either side to the center in passing over. He also advocated the use of spans 400 and 500 feet in length.

That modern engineers are anticipating something altogether superior to the past achievements, the following remarks of Mr. Roebling are evidence. He says:

"It was left to modern engineering, by the application of the principle of suspension, and by the use of wrought-iron, to solve the problem of spanning large rivers without intermediate supports. Cast and wrought-iron arches, of 100 feet and more, have been quite successful. Nor can it be said the limit of arching has been reached. Timber arches of much greater span have stood for years, and have rendered good service in this country as well as on the continent of Europe. It is worthy of notice, however, and to be cited as a curious professional circumstance, that the best form of material, so profusely applied by nature in her elaborate constructions, has never been used in arching, although proposed on several occasions. This form is unquestionably the cylindrical, combined in small sections, as is illustrated by vegetable and animal structures. Where strength is to be combined with lightness and elegance, nature never wastes heavy, cumbrous masses. The architects of the middle ages fully illustrated this by their beautiful buttresses and flying arches, combinations of strength and stability, executed with the least amount of material.

"The wrought-iron pipe, now manufactured of all sizes and in such great perfection, offers to the engineer a material for arching which cannot be excelled. A wire cable, composed of an assemblage of wires, constitutes the best catenary arch for the suspension of great weights; and, as a parallel to this, if the catenary is reversed, the best upright arch for the support of a bridge may be formed by an assemblage of wrought-iron pipes, of one and a half or two inches diameter or more. Arches of 1,000 feet span and more may be rendered practicable and safe upon this system. I venture to predict that the two great rival systems of future bridge engineering will be the inverted and upright arch—the former made of wire, and the latter of pipe, both systems rendered stable by the assistance of lattice work, or by stays, trusses, and girders."

It has already been stated that the bridge to be built at St. Louis is to be made of cast-steel; and in the meantime, extensive experiments have been going on to thoroughly test the strength of the metal, and no possible precaution will be neglected or effort omitted to make this bridge a complete and perfect success. Although not so great in length as the Victoria bridge over the St. Lawrence, which is nearly two miles long, nor the bridge over the Nebudda, in India, which is one and a half miles long, nor the bridge from Bassein to the main land, which is over three miles long, yet its magnificent spans and stately piers place it far above these bridges in character and structure. And when once built it will be grander than the Colossus at Rhodes, grander than the Pharos at Alexandria. It will vitalize the commerce of the Mississippi Valley, and unite the great railway chains between New York and San Francisco, the Lakes and the Gulf. When completed, it will place the name of its builder, Capt. James B. Eads, with those of Telford, Smeaton, Stephenson, and other

distinguished engineers of the world. Mr. Eads already stands prominent as one of the most enterprising and public-spirited citizens of St. Louis; and should this bridge enterprise, in which he is more prominent than any other, prove successful, his character and reputation will become the public property of the country, even as the bridge itself will be. Almost proverbial for the invariable success attending everything he undertakes, and with a world-wide reputation for practical ingenuity and indomitable energy, we hail his prominent identification with this work as an assurance of its successful completion. To him, and to the enlightened, public-spirited citizens who have pledged their capital and influence to sustain the enterprise, will justly belong the glory that will surely attach to the St. Louis Bridge.

EAST SAINT LOUIS.

ITS PAST HISTORY—GROWTH—PRESENT STATUS AND FUTURE PROSPECTS.

On the Eastern bank of the Mississippi River, directly opposite the city whose future greatness and prosperity we have heretofore predicted, and which prediction is fast becoming a reality, stands the young and thriving city of "East St. Louis."

Up through the floods and soft alluvial soil she has risen—little by little—each year overcoming barriers and difficulties that were considered almost insurmountable; and now having gained the mastery, stands as a powerful adjunct and ally—though not a rival—of the great city on the western bank of the river. So intimately associated are the two cities, and so necessary to each other's existence and prosperity, that we cannot do full justice to the one without mentioning the other. Indeed, we cannot truly prognosticate the growth and future greatness of the older and larger of the two, without also calling attention to the younger and less pretentious city, through which, as an *entrepot*, much of its trade and commerce must flow.

We have known the place hitherto, as simply a terminus for the railroads.

The few restaurants, saloons and boarding-houses at the depots were deemed the natural appendages of the railroads, but for many years no one thought of ware-houses, elevators, iron mills or manufacturing establishments or a Continental stockyard. If a thought was given to the place where the railroads terminated, beyond the interest mentioned, it was of an historical character; for, as "Bloody Island," it was known far and wide, and the tragic scenes enacted on its soil were the themes of frequent discourse, by old residents of St. Louis and strangers in transit. The character of this neighboring "province" is not yet clearly understood by the busy inhabitants of St. Louis, nor have they noted the many improvements going on constantly in the new city.

Be it known then to all, that the old lines are wiped out;—the familiar haunts for fishermen and sportsmen are no longer to be found; the localities known as "Bloody Island," "Illinoistown," "Papstown," and by whatever other names they may have been known, are the centres of trade and manufactures, now crossed and recrossed by wide and handsome streets bearing christian names. The old names have passed into

HISTORY.

There are a few of the old inhabitants of St. Louis living who remember

when there was no "Bloody Island." The "Father of Waters," covered the entire space of the island and frequently extended its dominion to the Bluffs beyond. Dr. Piggott, a very respectable gentleman, now living in St. Louis, at the advanced age of eighty years, informs us that when he was a boy, there was no island visible. Then he remembers that a small sand-bar appeared, and grew from year to year, until it became to be dignified by the name of "Island." Its first inhabitants were Indians, who came down the river in canoes and encamped on it, as soon as it became large enough. Here they would remain until they received their annuities from the government officers at St. Louis. This statement is corroborated by Dr. Peck, in his "Annals," who remarks that "several years after the settlement of St. Louis no "Bloody Island" or Duncan's Island existed, but directly opposite the "old market" square the river was narrow and deep, and persons could be distinctly heard from the opposite shore."

The Indians left no stains of blood on the Island, that we have any account of; but it remained for their white brethren to choose this barren spot as the place where they could, unmolested by law, settle their disputes according to the code of honor. These duels, in the early times, were frequent, and often bloody and fatal. Some of the contestants were famous men of that day, such as Thos. H. Benton and Gov. Peters, while others, but little known, have grown famous. As civilization and christianity progressed, the duello became unpopular, and "Bloody Island" has long since ceased to be regarded as in any degree sanguinary.

That part of the present city of East St. Louis, on the east side of Cahokia creek, running north and south, was formerly divided into three town plats, namely: old Illinoistown on the south, St. Clair in the centre and the town of East St. Louis on the north. Illinoistown had the honor of being the oldest settlement on the river next to Cahokia. Indeed, it is quite probable that French settlers located at this point almost simultaneously with those who began the settlement at Cahokia. There were cabins in those early times—before the founding of St. Louis—scattered all along from Illinoistown to Cahokia, at different points and several trading posts. "Illinoistown," for many years, maintained the dignity of a village and trading post, though its progress was very slow.

Its first impetus to growth was, when the citizens of St. Louis, alarmed by the encroachments of the river upon their harbor, took measures to construct the dyke across from the Island to the main land beyond Cahokia creek. The inhabitants awoke to the importance of this undertaking, and though not able to render much assistance, that we have ever heard of, they gladly assented to the improvement, and saw in it a means of protection from overflow and thereby a chance for a start in the world as it proved to be.

The various railroads, beginning or terminating on the Island, have probably contributed more than any other cause towards uniting the Island to the territory beyond the creek, and in filling up the low and overflowed space, have rendered it suitable for residences, places of business and streets.

Each road-bed is of itself a dyke and serves the double purpose of a railway

and security and protection from encroaching floods. With thirteen or more railroads crossing each other, and thus gridironing this once over-flowed tract, one can see how secure the foundations of the new city are becoming, and how easily the spaces between the different roads can be filled in time and brought to at least on equal grade, and made useful for business purposes, for which in its old and partially present condition it is entirely unfit.

INCORPORATION.

By an act of the Illinois legislature, passed in February, 1865, the city of East St. Louis was incorporated, with full powers and privileges usually pertaining to a city. The corporate limits, as fixed by the charter, bound the city, on the north, by a line east and west, immediately north of Bloody Island, on the north-east, by the southerly line of Illinois City—excluding it, on the south-east, by the north-westerly line of the common of Cahokia—excluding them also, and by the southeasterly line of Tenth street of East St. Louis proper, and its straight continuation across the common fields to the old bed of Cahokia creek, and from thence by a line due west to the middle of the main channel of the Mississippi, and on the west by the line of that channel which is the boundary of the city of St. Louis, and also the line dividing the states of Missouri and Illinois.

These limits, as we have before mentioned, include the old town of Illinois, commonly known as "Illinoistown;" the town of St. Clair, at one time known as "St. Clair City," the larger part of the platted town of East St. Louis proper, and the peninsula called "Bloody Island;" the latter—not long since—was subdivided by the owners, the Wiggins Ferry Co., as first, second, &c., Ferry Divisions of East St. Louis.

The territorial extent of the city is about three square miles. Its river front about two miles in length, is unexcelled anywhere in the Mississippi Valley. Along its entire length, the bed of the river does not exceed 1800 feet in width, at any place narrow enough at all times to prevent the formation of bars which might obstruct or endanger the city's harbor. The Wiggins Ferry Company, some years ago, at an enormous outlay of money, constructed, along the river front, a magnificent wharf nearly a mile long. They are constantly extending it—the rock being brought by barges from Carondelet, Alton and the recently made available and more convenient quarries at "Falling Springs."

CAHOKIA CREEK.

The city is penetrated, as we have already stated, nearly centrally, on a course about parallel to the Mississippi, by Cahokia creek, a small stream, which at one time, by a special law—unrepealed on the statute books—was declared a navigable stream for miles above the city. Its present depth, together with the many railroad bridges crossing it, have destroyed its availability as a highway, yet its usefulness in furnishing a never-failing supply of water for manufacturing purposes, is appreciated, and will invite the erection of more mills and other factories within its neighborhood. In times to come,

it may be very advantageously used as a main drain of a system of sewerage. Several plans have been proposed, purposing to turn to one side or the other, the course of Cahokia creek, before it reaches the city, but none as yet has met with the approval of those who would undertake it, were such a plan practicable, and we doubt whether East St. Louis can afford to favor such an undertaking. Unless the plan of turning the creek from its present self-chosen course be a part of a grand scheme—the object of draining the whole American Bottom and securing it against floods—the advantage, derived by East St. Louis, would not be commensurate to the inconvenience its absence might occasion.

DIVISIONS, STREETS, &c.

The city is, so to speak, composed of two almost distinct parts—one east, and the other west of Cahokia creek. The part west, as will have been seen, contains the city harbor and the several railroad depots; the part east contains the older settled portion of the city, the several railroad machine shops, iron rail mills, etc., and is the mart for the greater portion of the trafficking done within the whole limits. Both parts are connected with dykes—the one already referred to, built many years ago, and the other quite recently—nearly four hundred yards north of the old one, and running parallel to it, known as Christy avenue or Bowman's dyke. It is an extension of a street by that name, issuing opposite the middle of Carr street ferry-landing, and over it is operated the only horse railway at this time in use in the city. Another avenue of communication is being opened between these two sections of the city, about opposite Spruce street, in St. Louis.

Both parts of the city are well provided with wide streets, some of which are already macadamized, while others are in process of completion. A clause in the present city charter prevents the laying out of streets within the city, and outside, within a scope of one-half mile, unless in conformity with the existing general plan. A few disconnecting streets, established years ago, previous to the incorporation, are now undergoing the process of straightening, and will add much to the beauty of the city and to the comfort and convenience of the citizens and all who have occasion to use them. All alleys in the Ferry division have very wisely been made wide enough to permit the laying of tracks upon them, to offer the best possible advantages to shipping to and from the neighboring railroad depots.

POPULATION.

According to the United States census of 1870, the number of inhabitants living within the corporate limits of the city was upwards of 8,600. Since that time several manufacturing establishments have gone into operation, employing many workmen who have come from various parts of the world. Business houses have also been opened, bringing men of capital and influence to manage them. These additions of permanent residents with their families

have swelled the population to more than 10,000, and have aided greatly in giving tone and character to the place.

The old French inhabitants now form but a small portion of the population, but many of them are citizens of wealth and influence who have contributed largely to building up the city, while others with small means live contentedly with such employment as they can get, smoking their pipes and talking of the good old times. The Germans, in large numbers, and Irish, to a larger extent, have become permanent residents of the place, and take an active part, both in business and municipal affairs. A fair proportion of the population is of American origin, from all states east, west, north and south. All who have come, from whatever country or section, have found a cordial greeting, and with energy, strong muscle and whatever means they may possess, seem determined to contribute their share towards building up the place, and to prosper with it.

THE RAILROADS.

No less than thirteen important roads have their beginnings or endings in the city. They cross and re-cross each other at every point, and the music of the out-going and in-coming trains is continually heard in the streets, day and night.

The names of these different railroads are: The Ohio and Mississippi, the Chicago, Alton and St. Louis, the Toledo, Wabash and Western, the South-eastern or Evansville and St. Louis Air Line, the Vandalia, the Indianapolis and St. Louis, the Cairo Short Line, Rockford, Rock Island and St. Louis, the Ill. and St. Louis, the Ill. Central, the Pekin, Peoria and Jacksonville, the Cairo and St. Louis Narrow Gauge, the Pittsburgh Coal R. R. and the East St. Louis and Carondelet railroad.

Nearly all of these roads have machine shops and other works, employing a large number of hands. Most of these workmen have families, and in most instances they are the owners of their own firesides.

The Ohio and Mississippi railroad has, perhaps, the most extensive repair shops and machine works in the city. The company manufacture their own locomotives here, and employ in this branch of business, alone, over two hundred men. The Chicago and Alton railroad has large repair shops but does no manufacturing. The St. Louis and Southeastern road also has shops; and some other roads are about building shops for repairing and manufacturing machinery necessary for use.

Each railroad has a convenient and comfortable passenger depot with car-houses, freight depots and engine houses attached. Four of the railroads have excellent restaurants for the accommodation of passengers inside the depots.

MANUFACTURING ESTABLISHMENTS

Besides the machine and repair shops, connected with the different railroads, which we have already mentioned, there are many other manufacturing establishments and places of industry of great importance to the city. Prom-

inent among them are the following: The "East St. Louis Rail Mills," of which Mr. Gerard B. Allen, of St. Louis, is president. It is the oldest iron manufacturing establishment in the city. It has been in operation about ten years, and has, during that time, given employment to a large number of hands and has been of great benefit to the place. The mills do a large amount of work for the railroad companies, in the way of re-rolling old rails as well as in the manufacture of new ones. The original purpose of the company embraced the manufacture of iron bars, rails, rods and other forms for the use of artisans, together with the re-rolling of old rails. The working up of pig iron into marketable articles is becoming an important branch of the business, and will no doubt lead to the enlargement of the works.

THE ST. LOUIS IRON AND BOLT COMPANY

will, when fully ready for operation, become an important industrial enterprise. It will employ a large number of workmen, most of whom are skilled in the trade and come from foreign cities.

Other companies, for the manufacture of iron, are contemplated, and at no distant day will be found in successful operation.

THE AMERICAN COKE Co. and the ILLINOIS PATENT COKE WORKS are two extensive establishments for the production of coke—an article of fuel entering now very largely into the manufacture of iron and steel, and in fact coming rapidly into general use. In the whole system of political economy practised by the American people—no article is of more practical value than coke. The refuse dust of coal—commonly called "slack"—is carefully saved, ground up, if necessary, to a finer powder, then put into a washing pan and cleansed. By this process, all the slate and other mineral substances are separated from the coal. Then the fine dust is put in a crucible furnace, where the hydrogen gas is consumed—and while in a half liquid, or lava state, the coke is pulled out by the men, with iron hooks. The large flakes are broken up into lumps convenient for handling, and as soon as cooled, the coke is ready for market and for use. The large amount of coal used in and around East St. Louis and the number of coal mines in the immediate vicinity of the city, necessarily yield a very large supply of dust and fine coal for the manufacture of coke. The dust can be purchased at a low rate, consequently the manufacture of coke must be profitable. The works of the two companies will be enlarged in a short time.

The city has two excellent flour mills, within its limits, each one turning out from three to five hundred barrels of flour per day. A large brewery has been in operation some time, manufacturing, each year, an abundant supply of the popular Teutonic beverage.

There are also places for the manufacture of furniture, tin ware, boots and shoes, and three or four flourishing bakeries.

STORES, SHOPS &C.

There are, in the city, seven establishments devoted exclusively to the sale of dry goods and clothing. Most of these stores are large and elegant. They

carry heavy stocks of goods and do a good business. There are sixteen regular grocery stores—keeping on hand everything needed in the domestic economy.

Besides the above mentioned, are three hard-ware and stove stores three furniture stores, three feed stores, two telegraph offices, and offices for the various Express companies. Two banks supply the people with money sufficient for the carrying on business and carefully guard their deposits.

The citizens generally read the St. Louis daily papers, but two weekly papers of their own—"The *East St. Louis Gazette*" and "*The Peoples' Gazette*" are well patronized. These establishments are well supplied with presses and printing materials, and do a good job business.

The city will soon need a daily paper of its own, and whenever the time comes for such an enterprise, we believe the citizens will see that it is well sustained.

Shops of all kinds may be found in the city, aside from the regular stores, where the wants of the people may be supplied. There is no lack of eating houses and restaurants. The people could exist with a fewer number of saloons and drinking houses, but as a general rule the saloons in the city are well-kept, orderly and within the bounds of the law.

There are seven or eight hotels, most of them comfortable and well-kept.

A new hotel is about to be erected, in a popular thoroughfare of the city, by a company having an ample capital. It will be commodious, and in all its appointments in keeping with the wants of the public and the progress of the city.

SCHOOLS AND CHURCHES.

The excellent public school system of Illinois is in vogue here with an active and intelligent Board of Directors to carry its provisions into effect. Four public schools have already been established, and others will be opened whenever they are required. There are also three private schools, well sustained.

The St. Aloysius Academy was started some time since, under the auspices of the Catholic church. A new institution is springing up under the direction of the Baptists, which bids fair to be prosperous and powerful for good in a few years. This college enterprise was inaugurated about one year ago, under the direction of the Illinois Educational Association, of which Hon. John B. Lovington is President and Rev. J. M. Cochran secretary. Mr. Lovington donated to the association, property in East St. Louis, to be used for the benefit of the college as a site for the buildings and a nucleus for the building fund. The secretary is actively at work, soliciting aid from the Baptist denomination, and all others who desire a school of a high grade established; and hopes, during the present year, to commence the erection of the college buildings. When in active operation, this institution will afford the people an excellent opportunity of giving their children a classical and scientific education, without sending them away from home.

The following religious denominations are established in the city, the most of which have comfortable places of worship. Catholic—two churches—Baptist, Methodist, Presbyterian, German Lutheran, Evangelical Lutheran, Episcopalian, one each. There are also two colored churches—one Baptist and one Methodist. These several churches sustain, for the most part, flourishing Sabbath schools—where large numbers of children are instructed in the scriptures, in vocal music and in the rules of the church.

PUBLIC LIBRARY.

Under the provisions of a most liberal state law passed at the last session of the legislature, authorizing cities to create and to maintain public libraries and reading rooms, the city council of East St. Louis, by ordinance created the East St. Louis Public library and reading room, an institution which, if properly and will not fail to improve greatly the social attraction of the community. The city council, by that same ordinance, appointed the first board of managers, and from the columns of the *East St. Louis Gazette*, we clip the following information as to what has been done in furtherance of the subject. At the first meeting of these managers, the board met and appointed as President, Wm. G. Kase; Vice-President, Lorom Mitchell, and Secretary, William O'Neill; Committee on Ways and Means, Harry Elliott, H. C. Fairbrother and Lorom Mitchell; Committee on Library and Reading Room, E. L. McDonough, Charles C. Schuetz and P. C. T. Breen; Committee, on Books and Donations, Luke H. Hite, William O'Neill and H. C. Fairbrother. The Board will immediately procure a suitable hall, and if any money can be obtained from the Council, in anticipation of the taxes, procure books and have the Library in operation in a month. A code of by-laws and rules and regulations were adopted.

The history of East St. Louis would not be complete without a brief sketch of

THE WIGGINS FERRY COMPANY.

This mammoth corporation—so intimately blended with the progress of East St. Louis—may with truth be said to have had its origin as far back as the year 1795—77 years ago—at which time, Captain James Piggott—its founder—was authorized by the then authorities, to establish—and did establish—a ferry between St. Louis and the Illinois shore.

The Indian canoe formed the sole means of transit across the river in those primitive times.

In 1816 or 1817, Mr. Samuel Wiggins bought the ferry, at which time a very inferior one-horse boat constituted the "ferry."

From this time until 1828 horse boats only were used, in which year, 1728, the first steam ferry boat was brought out—and was called the St. Clair.

From the period when the whole business was done by an occasional canoe crossing the river, to the present day—the owners have kept pace with the increase of population and the demands of business.

They now have eight boats of large capacity admirably constructed for the trade of great strength and power. They also have the transfer boat Lewis V. Bogy, the Tug H. C. Creveling, and several barges—all of which are constantly engaged in transferring passengers and freight.

They have another Tug the "Saml. C. Clubb," not yet completed.

Thus we see the little acorn which, in 1795, had only a few canoes—and in 1832, only had one small steamboat—matures in 1872 and for several years prior thereto—into a good sized oak, with a fine and large fleet fully equivalent to sixteen large boats—and its landed property enhanced to the value of millions.

Had it not been for this corporation, which expended money by the hundred thousand, and years of labor, in raising and constructing the magnificent wharf, now forming the western boundary of this city, both the city of East St. Louis, and the harbor of St. Louis, would be in a sad plight to-day. Its great efforts saved the Island, or Third ward, from being washed away, and prevented the river from widening at this point, thus preventing the growth of many shoals and sand-bars.

It is true, that the adoption of this policy has greatly enriched them by creating, re-claiming, and preserving large tracts of valuable land, which otherwise would never have existed, or been tumbled into the river, nevertheless, it was evincive of great and far-seeing sagacity, which we may be permitted to say has always, up to the present, characterized the management of this company, to persist in such a course, despite the sneers of many, who predicted a failure.

The management is fully alive to the importance of holding out inducements to all manufacturing enterprises, to locate on their lands, which are admirably adapted to the purpose, by reason of their proximity to the railroads, to the river and to inexhaustible beds of coal, and invite proposals having that end in view. They also design, as we learn, to utilize a portion at least, of their immense wharf property, by fostering elevation and other enterprises adapted to such a locality.

Under the intelligent and untiring supervision of James J. Scanlan, Esq., as President and Samuel C. Clubb, Esq., as Superintendent, the onward march of this company cannot be otherwise than successful.

One feature connected with the Ferry company must not be omitted. Nearly forty-eight years ago, May 7th, 1825, Capt. Jno. Trendley was employed by Mr. Samuel Wiggins. From that day to the present he has been in the constant employ of the company, and the old veteran is still active and persistent in the discharge of his duties.

The Directors of the company are, viz :

JAMES J. SCANLAN,
M. MULLIKIN,
SAM. C. CLUBB,
FRANCIS M. CHRISTY,
WM. WIGGINS.

The Officers are :

JAMES J. SCANLAN, President.
M. MULLIKIN, Vice President.
SAM. C. CLUBB, General Superintendent.
HENRY L. CLARK, Sec'y and Treasurer.
WM. WIGGINS, Assistant Secretary.
JOHN TRENDLEY, Local Agent.

THE PROFESSIONS.

The city is not likely to suffer for the want of doctors, lawyers and clergymen. Though not an unhealthy place, several first class physicians have settled here to administer to the necessities of any who may need their services. The physicians are all good, consequently the town is remarkably healthy, and as our medical friends are well circumstanced in life, they make no complaints.

The lawyers, of whom there are half a score, or more, find plenty to do in making deeds to purchases, giving advice to business men, and in settling the disputes, which always will arise in the best regulated communities.

The insurance companies, both life and fire, are well represented, and seem to find enough to do to keep their agents all busy.

The sewing machine men are active, too, in the introduction of their favorite inventions. They seem determined to keep all the housewives busy, and all the people decently clad. Several agencies are in active operation and many machines are sold.

THE ILLINOIS AND ST. LOUIS BRIDGE,

Which is so near completion, will mark a new era in the history of East St. Louis, as well as in the history of the great city on the opposite side of the river. The shore piers and abutments are properly a part of the young city, of which we have written. The approaches to the bridge will change, in a great measure, the grounds and streets in its vicinity. To this end the several railroads will contribute by so changing their tracks, as to centre in a common road-bed near the entrance and all use one track for crossing. With street cars and a continuous and uninterrupted foot way over the bridge, the markets, the great wholesale stores and the fashionable bazaars of St. Louis, will be brought close to the doors of the citizens. Laboring men—the struggling mechanics, clerks and others of St. Louis who now go out in the western suburbs, five or six miles for cheap houses, will find it to their advantage to buy lots and build houses on the East St. Louis side; for the expense of crossing the bridge is only a trifle and more than half the time spent in the travel can be saved by the shorter distance.

The description of the great bridge given in another part of this work must suffice for the present purpose.

THE LEADING MEN.

In every town, of any considerable size, there is always a leading man—some one with brain, energy and pluck, who is willing to assume the responsibility and lead others on to the achievement of grand results. It is well for East St. Louis that there is such a man among them. For many years, Hon. John B. Bowman has borne a conspicuous part in the growth and development of the place. Acting as the representative of large moneyed interests, he has not only succeeded in greatly enhancing them, but through these in-

terests has contributed largely to the building up of public enterprises and the general good of the people. With a clear head, a strong will and an unflinching purpose, Mr. Bowman has undertaken and carried out schemes for the public good, which most men would shrink from. Most of the surveys in and around the city are the works of his hands; and the laying out of streets and alleys, has been under his personal supervision. Mr. Bowman is at present acting Mayor of the city, taking the place of Hon. Dennis Ryan, who was elected in 1870, but who died while in office. Mr. Bowman served in the same office two or three terms previous to the present incumbency, and as the first mayor of the city elected in 1865.

In personal influence and clear, practical, business sense, Hon. J. B. Lovington is second to none. He represents, also, large interests, and wisely directs them. He is a leader in benevolent movements and in educational matters.

Mr. J. W. Conlogue, widely known as one of the most skillful and successful railroad builders, has identified himself with East St. Louis, as his home and theater of future activity. He was attracted there by the superior opportunities the situation and surrounding circumstances offered. Mr. Conlogue has just completed the East St. Louis and Carondelet railway as a most valuable connecting link between the great system of railways centering on both sides of the Mississippi—at East St. Louis and the great city on the west shore—the future inland metropolis of the continent. Mr. Conlogue is yet in his prime—and his presence in East St. Louis will, in the future, as in the past be marked by practical success and accomplished works for the public good.

Mr. Samuel Gaty, so well and favorably known in St. Louis, by his long residence and successful business career, is almost considered one of the leading citizens of East St. Louis, on account of the large landed interests he represents and controls in the city.

In social, educational and generally progressive movements, as well as in political affairs, we find Mr. Thos. Winstanley, H. Oebike, Mr. St. John, Mr. L. H. Hite, Mr. F. Withram, Judge Manners, Mr. Wider, Mr. O'Neill, Mr. Jarrot, and many others, bearing an active part. In fact, East St. Louis has no lack of good men, with vigorous minds and energy, sufficient to lead the people in any enterprises they may see fit to inaugurate. While we mention the names of some as they occur to us, we would not be unmindful of others, who in a greater or less degree, have done, and still do much for the city's prosperity and for the welfare of the people.

MAYORS OF EAST ST. LOUIS.

The mayor of the city, by the terms of the charter, is not eligible to two successive terms. The following is a list of the several mayors of the city, since it was incorporated.

	Time.	Name.	Term.
1	Elected in 1865.....	Jno. B. Bowman.....	2 years.
2	" " 1867.....	Jno. B. Lovington.....	1 "
3	" " 1868.....	Jno. B. Bowman.....	1 "
4	" " 1869.....	Vital Jarrot.....	2 "
5	" " 1871.....	Dennis Ryan.....	2 "

STREET RAILROADS.

One horse-railroad has been in operation for more than a year last past, and is doing a profitable business. It runs, as before noticed, across the city, from east to west, over the upper dyke, from its western terminus on Front street, near the Ohio and Mississippi depot, to its eastern end at the East St. Louis Bank, at the corner of Missouri and Collinsville avenue. The road is owned by the East St. Louis Railway Company. Thos. Winstanley, as vice-president and superintendent, has charge of and directs its operation. It will soon be extended, to connect east with the national stock-yards, on the north-east limits of the city, and west, with the Washington avenue line, in St. Louis, of course over the great bridge. One fare will be charged, including toll, to any place on Washington avenue, St. Louis.

The charter for another and competing street railroad, was obtained, and a temporary organization effected. It will soon make its appearance, with a fair prospect of success.

THE EAST ST. LOUIS AND CARONDELET RAILROAD deserves especial mention in this chapter, as it is to serve an important purpose in the trade and commerce both of East St. Louis and St. Louis, Mo. It will be used almost exclusively in the transportation of freight, from the other railroads to Carondelet, where a connection is made with the Kirkwood and Carondelet branch of the Missouri Pacific railroad. The charter for the road was obtained from the Illinois legislature in 1852, but nothing was done towards building it till March, 1872, when the enterprise was taken in hand by J. B. Bowman and J. W. Conlogue. The latter gentleman, as managing director, with his great energy and skill in railroad building, had the direction of the work, and pushed it to a successful completion, in August, 1872. The main line is eight miles and a half in length with a branch to Falling Springs, three and a half miles long. From this last-named place, stone is obtained for building the stock-yards, and for other public uses. A large part of the business of this road will be the transportation of coal to the furnace and iron mills of Carondelet, and of ore and pig metal hence to the mills and manufactories of East St. Louis.

THE GRAIN ELEVATOR.

To accommodate the immense grain trade which Illinois has with the city of St. Louis, it was thought wise, five or six years ago, to build an elevator for the purpose of handling grain in bulk, at East St. Louis.

The elevator was built and has been a profitable enterprise, but so rapidly did the trade in grain increase, that another was needed and is already filled to overflowing with the great staple. And still another has been called for and is in the course of erection.

THE WIGGINS FERRY COMPANY received its charter from the legislature of Illinois in March, 1819. The grant for exclusive privileges, was to Samuel Wiggins, his heirs and assigns. Since that time, several amendments have been made to the charter and other privileges granted. This company, therefore, has had almost the exclusive monopoly of the transportation between

East St. Louis and the great city on the opposite side of the river, and will hold control until the completion of the bridge. The company is wealthy in lands, in boats and in the stock which it has issued. Though a slow way of crossing the river, it is a sure and safe one, and the people, so long accustomed to the fair and honest dealing of the officers and employees of the company, will reluctantly give up the ferry boats, even for something better. The company runs eight or ten boats each day back and forth across the river, making trips in the day-time every five or ten minutes. There are three regular ferry landings on the East St. Louis side, all of which are constantly crowded with teams, carriages and foot passengers, awaiting transportation. How much business is done by this company can be imagined, when we present before the mind, one city with nearly four hundred thousand inhabitants and its railroads, seeking a constant communication with the East, and another city of ten thousand inhabitants and thirteen railroads, seeking constant communication with the West; the many furnaces and mills and the thousands of families in the great city to be supplied with fuel; the same great population constantly demanding supplies which must cross the river; and the vast west with its teeming population, to receive in this way its supplies also. The mind is hardly able to comprehend this vast interest and as one stands

ON THE LEVER

In East St. Louis, any fair day, with all the ferry boats running, it is a bewildering sight to see the great coal wagons, full to running over, moving down to the landings;—and the farmers' wagons, loaded down with the products of the soil;—the immense omnibusses of the "Transfer company," rushing on with fearful speed;—carts, wagons, carriages and all sorts of vehicles, besides foot passengers innumerable, all pushing to the same place—all aiming at the same object—a passage across the river.

The amount of COAL which crosses the river, from East St. Louis, each day, to supply the St. Louis market, has been estimated at 500 car-loads, or 150,000 bushels. This vast amount of fuel passes *through* the city of East St. Louis. When it reaches the St. Louis side of the river, it has increased four or five cents in value per bushel. This leads us, therefore, to consider the advantages which this young city—East St. Louis—possesses, as

A MANUFACTURING POINT.

The coal fields are all around the city. The railroads penetrate them at every point of the compass. The coal produced from the mines is of that quality, also, which is generally desired for manufacturing purposes, and can be delivered to any part of the city at a cost from one-third to one-fourth less than it can be delivered to the manufacturing establishments of St. Louis. Land for building sites is cheap. Labor ought to be cheaper than in a crowded city, as house rents are lower and food is cheaper. These facilities will, we doubt not, be taken advantage of very shortly. The example already set by Mr. Allen, Mr. Filley, Mr. Meier and other capitalists of St. Louis, will be fol-

lowed by many more; and instead of two iron mills, there will be a dozen or more, working up the crude wealth of Iron Mountain another exhaustless iron field, into useful articles of labor and merchandise.

There is no reason why places for the manufacture of farming tools and agricultural machinery, cannot be established and made profitable in East St. Louis. Men of capital, who have not hesitated to invest their money in establishments of the kind mentioned, in prairie towns, whose growth is uncertain, and whose facilities are infinitely smaller, would do well to look at this place and its advantages. Coal can be contracted for the year round, delivered at the furnace door, convenient to any of the main railroads, at from \$1 50 to \$1 75 per ton.

THE ST. LOUIS NATIONAL STOCK YARDS OF EAST ST. LOUIS.

The close proximity of St. Louis to the great pastoral region of the Central plain of the North America, very naturally fits her for the central stock market of the country. And the appreciation of this important fact, led enterprising capitalists of the east, to project the establishment of an immense stock yard, in the vicinity of St. Louis.

About two years ago the question of constructing grand stock yards near East St. Louis was agitated, the location selected, the ground purchased and the work of building begun. The vast numbers of cattle coming into the city of St. Louis every week, from Missouri, Texas, Kansas, the Indian Territory and elsewhere being transported across the river for re-shipment east and north, suggested to several gentlemen interested in the cattle trade, the importance of having a place where the animals could be temporarily quartered and fed until arrangements for their further transportation were effected. Farmers and drovers from Illinois wishing to make St. Louis their market, always found it inconvenient to drive their stock to the city, without previous arrangements being made for sale. Often have they brought droves of cattle, swine and horses to the St. Louis market, and been compelled to sell them at a sacrifice because there was no suitable place for shelter and feeding.

The honor of originating this enterprise, properly belongs to Col. A. M. Allerton, of the firm of Allertons, Dutcher & Moore, of New York. Under his experienced leadership, a company of live-stock men, was organized.

Col. Allerton, besides being a gentleman of high social position, is a thorough business man, and widely known over the country for his enterprise and integrity, and will, therefore, be a desirable acquisition, as a leading citizen of St. Louis.

Chicago before the construction of the Union stock yards was situated similarly to St. Louis to-day! Cattle were driven through the streets endangering the lives of the inhabitants and causing delay to other travel, &c.—Now they arrive and depart in cars.—At that time, Chicago had five different stock yards which were called: Cottage Grove, Lake Shore, Michigan Southern, Pittsburgh and Fort Wayne and the North Western, all of which were not doing one third as much business as the "Union" are doing at the present time.—

The increase has been caused by their being concentrated at one point, which is decidedly to the interest of the commission man, to the owners of stock, and also to those who desire to purchase, because they can tell at once how much stock is in the market, and know at what price they can purchase.

St. Louis now labors under the same disadvantage that Chicago once did, as the present receptacles for stock are so located and scattered, that it takes several hours before one can ascertain what is in the market.

It is surely to the interest of all stock men to have one place to do all their business, thus saving much loss of time. Parties interested in the stock business, and in fact citizens generally should know that the "St. Louis National Stock yards," are located at East St. Louis, not to exceed a distance of 15 or 20 minutes from the Court House, (after the bridge is completed,) where such accommodations will be furnished that have never existed near any city in the United States, and the city of St. Louis will reap all the benefits to be desired without any of the nuisances, such as the driving of cattle, swine, sheep and last, but not least, herds of loose mules, occasioning in many instances loss of life and damage to property, to say nothing of the cartage of offal, which is very unpleasant to the senses, particularly in warm weather.

The St. Louis National stock yards, will also be prepared to accommodate the packing and slaughtering houses at a merely nominal rent, as they have ample grounds and plenty of water, with the facilities for shipping to any point at all times.

It is thought by competent judges that within the next three years the business will equal that now done at Chicago, and will most likely exceed it, as the accommodations to be furnished will be so superior to those that now exist, that it cannot but be a success.

The establishment is called "The St. Louis National Stock Yards," and is situated on a tract of 400 acres of land purchased of Messrs. Bowman and Griswold, adjoining the East St. Louis city limits on the northeast. Being contiguous to the city and so closely connected with her interests, one of her prominent citizens also being a stockholder, we treat it as one of East St. Louis's own institutions. The following named gentlemen were the stockholders who organized the company: Wm. H. Vanderbilt, Horace F. Clark, Augustus Schell, James H. Banker, A. Boody, A. B. Baylis, Samuel F. Barger, Allertons, Dutcher & Moore, T. C. Eastman, Alex. M. White, Isaac H. Knox, John L. Macaulay and Levi Parsons, of New York, J. N. McCullough and H. H. Houston, of Penn., Andrew Pierce of the A. & P. R. R., and J. B. Bowman, of East St. Louis.

Col. Allerton has had active charge of laying out the grounds and constructing the buildings. Everything is on a grand scale and the yards and buildings will have immense capacity. Alleys and avenues have been laid off and will be paved, like the streets of a city. The yards or sheds for the accommodation of cattle are situated on the avenues like rows of houses.

The three avenues, when completed will have 289 yards, capable of holding 10,000 or 15,000 horned cattle. Each yard will accommodate from twenty to one hundred and fifty cattle, with troughs for drinking and mangers for feeding.

The yards are to be paved with the Belgian pavement—the stone to be taken from the Falling Springs quarries. Messrs Himrod & Co., the operators of one of these quarries, have a contract for paving the yards and avenues and have already completed a large portion of the work. The sheep and hog houses, are very commodious buildings, situated on the west side of the grounds. The hog house is 1122 feet long and one hundred feet wide and will comfortably accommodate 20,000 hogs. The sheep house is smaller being 512 feet long by 100 feet in width. Its capacity is from 6,000 to 10,000 sheep. The stables for horses are elegant and roomy. 1,000 horses and an equal number of mules can be well provided for. Barns for hay and bins for corn are conveniently situated near the yards and stables. The establishment is provided also with several immense Fairbanks' scales, one of these costing \$2,500 and having a capacity of 120,000 lbs.

The yards, pens, stables and other buildings will receive water from hydrants fed by pipes underlying the whole surface of the grounds, which in their turn, receive their water from immense reservoirs. The water is forced into the reservoirs from Cohokia creek, by means of steam pumps.

It is in contemplation also to have one artesian well to supply the hotel and drinking fountains with the purest of water. The stock yards will, in addition to these immense works, have a very fine hotel, four or five stories in height, for the accommodation of stock men and all those who may visit the place. The building of this edifice has already commenced—the contract having been let to Messrs. N. L. Milburn & Sons, of St. Louis, for \$102,000. The entire cost of the building when completed will be about \$115,000.

Another large building is being constructed for the use of the company—to be an office building—and will cost \$40,000 or more.

The yards will be in readiness to receive stock in three or four months, and all the buildings in the course of the spring of 1873, will be open for business.

With the completion of the great bridge and the opening of the National stock yards for business, a new impetus will be given to industry and commerce on the East St. Louis side of the river. All the great transactions in cattle, horses, sheep and swine will take place at the stock yards, and we prophesy that the slaughter-houses also, and the pork packing establishments will, before many years, all be near the stock yards. This will necessitate the building of mechanical shops of various kinds and dwelling houses for the large number of workmen that must be employed to carry on these operations.

The organization of the stock yard company, as recently perfected, consists of the following gentlemen: A. M. Allerton, of the firm of Allerton, Dutcher & Moore, New York; Azariah Boody, President, Toledo, Wabash and Western Railway, New York; Augustus Schell, Vice-President, Lake Shore and Michigan Southern R. R., N. Y.; J. B. Dutcher, New York Central and Hudson River railroad, New York; T. C. Eastman and A. M. White, capitalists, New York; H. H. Houston, Pennsylvania railroad, Philadelphia; N. Mc Cullough, Pittsburgh and Ft. Wayne railroad, Pittsburgh; Oscar Townsend, President Cleveland, Columbus, Cincinnati and Indianapolis railroad, Cleveland; John

B. Bowman, of East St. Louis, and Andrew Pierce, President of the Atlantic and Pacific railroad, St. Louis, Mo.

Col. A. M. Allerton, is President, and R. M. Moore, Esq., Secretary and Assistant treasurer.

All the railroads terminating at East St. Louis, will be connected with the stock yards by a railroad now being built by the company, and a street railroad for the accommodation of visitors and the general public will soon be constructed running from the main street of the city to the hotel on the grounds.

OTHER PROJECTS.

The East St. Louis Gas works company, was organized several years ago, but not until within the past six months, has anything definite been done, except the subscription of stock. The company is now, however, nearly ready for operation and it will not be long before the streets will rejoice in the rays of pure gas-light.

A water works company is also organizing, and the determination of the citizens is, to bring a good supply of the Mississippi fluid to every man's door. This can be done without involving a great public expense, and with small cost to the individual citizen.

It is expected that the company will be fully organized and ready to put their plans into definite shape early in the Spring of 1873.

The city has yet no public park. There are, however, two small public squares, which serve the purposes of recreation to the citizens. A public park has been talked of and property owners have made liberal offers to the city, as an inducement for the inauguration of such an enterprise. On the east of the city, several fine tracts have been spoken of, for park purposes, and will, no doubt, be selected at some future time. When the present city limits are more densely populated, and when the smoke and steam from many furnaces, factories and workshops render the city air unpleasant and unhealthy, the people will have a park to air themselves in. It will come in due time.

THE LUMBER TRADE.

One great interest of the city is, sometimes, overlooked, when the many important enterprises are spoken of. The lumber business has for many years, been a source of great profit, to those engaged in it, and has been a means of bringing other kinds of trade to the city. It requires an immense amount of capital and labor to carry it on successfully. There are, within the city, some eight or ten yards, each of which is doing a large and increasing business, as nearly all the lumber sold, within a radius of seventy-five miles, is purchased at this point, the small dealers, in the different country towns, being supplied here, the prices being considerably below those of St. Louis. The principal dealers are Messrs. John B. Lovington & Co., Howe & Rablin, who have a saw and planing mill in connection therewith; Butterfield, Hice & Co., S. Mayo, Cavey, Herdman & Co., Schulenburg & Boechler, Pearce & Co. and Francis Wittram.

The latter died in office, June, 1872, and the Hon. J. B. Bowman was elected as active mayor for the unexpired part of his term, and is now mayor of the city.

EAST ST. LOUIS ELEVATOR.

This spacious elevator is situated below the bridge piers, where the water affords a good landing, for the largest boats, the year round. Their facilities for shipping are unexcelled, being in connection with all the railroads. The capacity of this elevator, with improvements, now in course of erection, will be fully 850,000 bushels.

CONNECTICUT LAND COMPANY.

The Connecticut Land Company of East St. Louis is a corporation for the purpose of facilitating the transfer of real estate, within the city limits. It was originally formed by some gentlemen scattered over the country, but who were all owners of property in the town. And while the corporation, or company afford many valuable facilities for the rapid exchange or transfer of its real estate, it happily indulges in none of those mercenary functions that corporations usually possess.

CLOSING.

This brief sketch of a city, which, at no distant day, promises to rank second only to Chicago, in its own State, and to become by virtue of its proximity to St. Louis—only 1800 feet distant, divided by the “Father of Waters,” but united by bands of iron and steel, such as the great Eads bridge, and other bridges soon to be built from shore to shore, between St. Louis and East St. Louis, within the next decennium—an integral part of it;—we cannot forbear to say, that our opinion of, and faith in the realization of that future, which we believe to be in store for it, is, in no small degree, based upon the fact, that the municipal authorities of East St. Louis, have quite recently fixed the general grade of its streets and highways above the height of floods, such as inundated its then unprotected territory in 1844, 1851 and 1858. Permanent, solid and safe embankments surround the city on all sides, or are in course of construction. Its principal streets are gradually raised to that higher grade upon which alone its business facilities can be developed and maintained. The security afforded by this change has ushered into existence a new era for the city, and will bring with it an influx of business, capital and enterprise, which would forever have remained foreign to its confines but for this security against inundation, such as in times happily gone by, precluded every idea and excluded every project for making useful and available the many and rich opportunities otherwise inherent to the locality of East St. Louis.

MISSOURI AND HER RESOURCES.

Missouri is the great central State of the World's Republic. Geographically considered, nearly equal portions of the American Union stretch out from her borders towards the North, South, East and West. Its dormant and latent energies being once awakened, and developed, Missouri must become the Empire State of the Center, as New York is of the East. Its climatic position is altogether propitious, the surface not being greatly elevated, and the State lying between the temperate parallels of 36deg. 30min. and 40deg. 30min. N. latitude, and between the meridians of 89deg. 2min. and 95deg. 52min. W. longitude.

The greatest length of the State, from East to West, is 320 miles, and its width, from North to South, 280. These dimensions embrace an area of 67,380 square miles, equal to 43,123,200 acres of land; being about one-third larger than England, and possessing twice the productive capacity of that wonderful country. Missouri is larger than any State east of the Mississippi, and possesses as much fruitful and arable soil as any of her sister States, whether East or West. Not less than 36,000,000 acres of land in Missouri are well adapted to furnish all the products of a temperate clime.

No State is better supplied with fountains and streams, as well as with great rivers. It is bounded and bisected by the Mississippi and Missouri, two of the largest and longest rivers in the world; rivers whose fountains are more than three thousand miles away, fed by the waters of the Itasca, or the eternal storms that breed and brood about the cliffs and canons of the Rocky Mountains, whose affluents water a score of States and Territories, and whose accumulated floods are poured into a torrid sea. One thousand miles of these great rivers lie within or upon the boundary of Missouri. The principal streams flowing into the Mississippi from this State are the Salt, Meramec, White, and St. Francois, the two latter being more properly rivers of Arkansas; and the main affluents of the Missouri are the Osage, Gasconade, LaMine, Chariton, Grand, Platte and Nodaway.

Nature has given to Missouri vast resources in agricultural and mineral wealth, also abundant facilities for commanding and managing the internal commerce of the West. St. Louis, her commercial capital, is near the confluence of the two great rivers. There she stands, like the Apocalyptic angel, "with one foot on the land, and the other on the sea," beckoning to her the white-winged messengers of commerce from every ocean, and stretching out her iron fingers to grasp the internal trade of half a continent.

The geographical and mineralogical features of Missouri are not only peculiar, but such as add greatly to the value of its products. What is known as the "Ozark range"—not of mountains, but of hills—passes through the south half of the State from west to east; sometimes appearing merely in the shape of elevated table-lands, and then again broken into rough and rugged hills. Most of the latter, however, are rich in metals or minerals, such as iron, lead, zinc, copper, coal, etc. Much the larger portion of this hilly region, too, is susceptible of cultivation; and for raising sheep, or the culture of the cereals, fruits, and especially grapes, no better land can be found anywhere east of the Rocky Mountains. As the first settlers in Missouri generally sought the rich alluvial and prairie soils of the northwestern and central portions of the State, the vast and fruitful region lying in the southwest, south, and southeast was neglected, and deemed almost worthless. Large quantities of this land, so rich in minerals, and readily yielding fine crops of grain and fruit, have, within a few years, been sold for 12½ cents per acre. That time has passed, however, and thousands of enterprising immigrants, both farmers and miners, are making for themselves pleasant and profitable homes in the south half of Missouri.

The soil along the river bottoms of Missouri is rich as the famed valley of the Nile. Only a little less fruitful, and much more easily put into cultivation, are the millions of acres of rich prairie land in the northwest and central portions of the State. The capacity of this State for producing food for both men and animals is something enormous. Whenever there is a full development of the State's resources, Missouri will furnish happy homes for five millions of people; one-half making bread, not only for themselves, but to feed two or three millions of miners, mechanics, merchants, and professional men; and the whole State receiving every year many millions more for her exports than she pays for imports.

Looking at the two grand districts of Missouri a little more in detail, and beginning with the extreme southeast, we find an extensive bottom-land along the Mississippi, extending from Cape Girardeau south to the Arkansas river. It includes many swamps, which are rendered almost impenetrable by a dense growth of trees. The most extensive of these, called the Great Swamp, commences a few miles south of Cape Girardeau, and passes south to the mouth of the St. Francois, penetrating far into the State of Arkansas. This peculiar feature gave to Missouri its southeastern "pan-handle," or projection south of 36° 30', the once charmed parallel between freedom and slavery. The early settlers in the region below Cape Girardeau, and south of the proper boundary of the State, could not reach any settlements in Arkansas, on account of the swamps, and prayed to be attached to Missouri, where they were in the habit of trading and getting their corn ground.

Turning northward from the swamp region, and following up the course of the Mississippi, we find a belt of high lands reaching all the way up to the mouth of the Missouri. The highest part of this range is between St. Genevieve and the mouth of the Meramec, where the ridge rises from three to four hundred feet above the waters of the Mississippi. This ridge of high lands is the Ozark range, before alluded to, cut asunder by the Father of Waters,

extending westward through the State, not losing its rough and rugged character until it is lost in a ridge of high prairie.

In the country north of the Missouri, constituting about one-third of the State, the country is more level, but sufficiently undulating to secure good drainage; and the soil is generally excellent, a large portion of the country being a rich prairie, watered by numerous streams, each with its belt of timber. Altogether the richest soil and most productive portions of Missouri are to be found in the western and northwestern counties of the State. The Platte country, in the northwest, and Clay, Jackson, and Lafayette counties, in the west, have long been famed for their wonderful yield of hemp, grain, and stock.

THE CLIMATE

Of Missouri is peculiar. Being situated about half way between the great Southern Gulf and the semi-arctic regions of the North, with but slight barriers on either side, she is subject, like all Western States of the same latitude, to frequent changes of temperature. But notwithstanding the great and sudden transitions as indicated by the thermometer, Missouri may be considered a very healthy State. Pulmonary diseases very rarely originate here. In most parts of the State plowing and putting in crops commence in March, and the forests are in full foliage early in May; while in the extreme southern counties cotton is raised, and young stock manage to live through the winter with little or no care.

Taking the State with all its advantages—its fruitful soil and healthful climate, its vast wealth of metals and minerals, its facilities for transportation by rail or river, its present wealth and prospective greatness—and there is scarcely another State in the American Union that affords such attractions and inducements either to the capitalist or the emigrant.

HISTORY.

Although the life of Missouri, as a State, has only extended through half a century, yet it has been the busiest and most progressive half century in the annals of the world, and its characteristics have been stamped upon the history and fortunes of the State. Missouri had its origin amidst the first great political troubles and disputes of the American Republic. A compromise gave legal existence to the State, and this compromise was finally washed out in the blood of a civil war. The fraternal strife which for four years transformed the most beautiful country and the grandest political empire in the world into a great battle-field, gave a full share of its bloody fortunes to Missouri. Some of the fairest portions of the State were almost depopulated, and whole sections passed through the ordeal of blood and fire, and when the desolation had gone by, presented nothing but unpeopled and smoking ruins. But after the night came the day, and the horrid wounds inflicted by civil war began to be healed by the angel of peace. It was sharp and painful surgery that cut away the old excrescence, but it left the body politic healthier, and all the people happier and more prosperous than ever before.

Under the old regime, the States of Illinois and Indiana, although far behind us in natural resources, were outstripping Missouri in the march of empire. Although the great advantages of the State brought many immigrants in spite of the system then in vogue, yet our sister States across the Mississippi were, at the commencement of the war, far in advance of us as regarded population and material wealth. This state of things is being rapidly changed by the multitudes of immigrants from the Eastern and Middle States and the Old World, who are seeking homes on our rich prairies, in our fruitful valleys and extensive forests, or in our exhaustless mines of iron, lead, and zinc.

POPULATION.

The present population of Missouri may be safely put down at nearly, if not quite, 2,000,000. The first census of the State, when it was admitted into the Union in 1821, showed a population of 70,647. From that date the number of inhabitants very nearly doubled each decade up to 1860, when the population of Missouri, including white, free colored, and slaves, amounted to 1,172,797. The war drained the State, not only of material wealth, but of multitudes of people; but the return of peace, and the increased and ever-increasing tide of immigration, will bring the State up to three millions before the year 1880. Of the present inhabitants of Missouri about one hundred thousand, or one in fifteen, are colored. Considering the condition these people have been in for generations past, they have conducted themselves with great propriety since their formal emancipation in 1865. A large majority of them are not only making an honest support for themselves and families, but, by their industry and frugality, accumulating a decent competence. On the south side of the Missouri river especially, there is a large German element in the population. Wherever these people make homes in the country, and plant vineyards or cultivate small farms, you may look with confidence for present prosperity and future wealth. Every town or neighborhood in Missouri that has been planted by Germans is now actually wealthy, or has the elements of certain prosperity in the future.

EDUCATION.

But let us pass from these general views of a great State and its varied resources to some of the details which constitute the grand result. When we speak of the wealth of a State, we should not so much consider its rich mines, its fruitful soil, its genial climate, and its natural channels of commerce and communication, as its people. The people are all that give real wealth to any country. Without inhabitants, the fairest lands upon which the sun shines would be of no more value than a barren beach or a rocky cliff. But, then, the people must have intelligence in order to give value to the country they inhabit. Savages make a land poorer instead of richer by their presence. And just in proportion as a community rise in the scale of civilization, intelligence, refinement, and moral worth, their lands and houses go up in their money value.

In this matter Missouri made a grand investment at the very start, and her school fund has been so well husbanded and increased by legislation that she has now a system of public instruction that may challenge comparison with that of any State in the Union. It is not meant by this that the educational machinery of the State is everywhere in perfect working order, but that the foundations of the system are laid deep and secure; and if any child of Missouri grows up in absolute ignorance, it will be because it refused the light that is offered almost "without money and without price."

The following items will serve to indicate the present working of the common school system in Missouri: Number of children in State between five and twenty-one years, 584,026 for the year 1869; number of children in public schools, 249,729. It would be safe to estimate that 150,000 students were in the numerous colleges, seminaries, private and parochial schools, during the same year. Number of teachers in public schools, 7,145; number of public schools in the State, 5,307; number of public school-houses, 5,412; value of public school-houses, \$3,087,062.

The richly-endowed Industrial College, incorporated with the State University, at Columbia, offers not only an academic but an agricultural education to all who desire to become scientific as well as practical farmers. Other incorporated and leading institutions of learning in Missouri are: North Missouri Normal School, at Kirksville; William Jewett College, at Liberty; Grand River College, at Edinburgh; Plattsburg College, at Plattsburg; McGee College, at College Mound; Christian University, at Canton; Washington University and St. Louis University, both at St. Louis; St. Paul's College, at Palmyra; and Bethel College, at Palmyra.

MANUFACTURES.

No great community, living in a fertile and productive country, can be long or largely prosperous unless it shows a certain amount of independence, or rather an ability and disposition to supply most of its ordinary wants. A simple monopoly is always an evil, tending to enrich a few and impoverish the multitude. Before the war, the Southern States made cotton and sugar, and looked to the North almost entirely for breadstuffs. Since the war they have learned to produce a large portion of their food supplies, and, as a result, will soon be more prosperous than ever before.

Missouri has a food-producing capacity sufficient to sustain thirty or forty millions of people. But it is by no means her policy to devote all her energies to raising corn, wheat, and pork, trusting entirely to other States and foreign countries for the ten thousand articles and implements demanded by the present civilization and the various industries connected with it.

Missouri has illimitable quantities of the raw material, and wonderful facilities for generating the necessary power to transform that raw material into the thousand forms suited to the wants of civilized men. Until lately we have done but little in the way of manufactures beyond making wheat into flour, corn into whisky, hemp into bagging and rope, tobacco into shapes to suit smokers and chewers, and iron into stoves and heavy castings. But a new era

has dawned upon the State. We have discovered that we can make a thousand articles of primary and pressing need just as well as they can be made in New or Old England. In the single article of iron, the capital invested in its manufacture has quadrupled within the last four or five years. Capitalists from abroad, who have studied our resources and facilities for manufacturing iron, have become satisfied that Missouri must soon become one of the largest iron-producing States in the world; and they are adding millions to the working capital employed in this branch of industry.

The time is approaching when we shall not have to import our railroad iron from Europe, much of our pottery and queensware from other States, our glass and hardware from the good city of Pittsburg, and many of our woolen and cotton goods from New England. When that time comes, Missouri will have achieved her great destiny as the Empire State of the Mississippi Valley.

CREDIT OF MISSOURI.

A country possessing such vast stores of material wealth as Missouri, although much of it is still undeveloped, should have proper credit and consideration in all bureaus of finance throughout the world. A State that could be sold under the hammer to-day for more than a thousand millions of dollars should have her bonds as good as gold. They are nearly so, in spite of the heavy railroad debt incurred before the war. This debt is being rapidly canceled, and very soon Missouri 6's will stand at par or a premium. It may not be improper to add in this connection, that the assessed value of the taxable property in Missouri in 1868, with such addition as the assessors themselves allow to be correct in estimating the real cash value of property, amounted to \$1,177,000,000, and this vast amount will be increased to at least \$1,250,000,000 the present year.

STOCK-RAISING.

Perhaps there is no one of the great Western States of the American Union better adapted to stock-raising than Missouri. Abundant crops of grain and corn are almost as certain as the return of the seasons. The climate in most parts of the State is mild enough to preclude the necessity of much shelter or long feeding in winter. Small streams, with their meandering branches and bubbling fountains, lie like a net-work all over the State; and some of these streams are so impregnated with salt as to supply stock with all they need of this article.

The following exhibits the number and value of horses, mules, cattle, sheep, and hogs, in 1868 :

	VALUE.
Horses..... 375,400.....	\$19,203,427
Mules..... 86,299.....	4,822,988
Cattle..... 933,517	12,169,234
Sheep.....1,385,805.....	1,951,078
Hogs.....1,952,532.....	3,734,006
Total...4,733,463.....	\$41,880,733

VALUE OF LAND IN MISSOURI.

It is doubtful whether any other State in the Mississippi Valley can furnish good land at so moderate a price as Missouri. On the south side of the Missouri river there are more than a million of acres (much of it good land) still to be given away as homesteads. In the same portion of the State there are millions of acres, mostly lying south of the Osage river, that can be bought for from fifty cents to five dollars an acre. Much of this land is equal to any in the whole country for vineyards, fruit, and sheep farms. In the extreme southeastern quarter of the State there is an immense body of the richest land in the world, which can be restored to use by drainage, and that, too, at a moderate cost, compared with the value of the land to be redeemed. Not only can a large portion of the land in the south half of Missouri be obtained very cheaply, but even the finely cultivated farms along the valley of the Missouri and all over the rich prairies of the western, central, and northern portions of the State, can be purchased lower than the same kind of land and improvements in Illinois. No country in the wide West offers stronger inducements to the enterprising and industrious immigrant than Missouri. If he is a farmer, our fruitful soil awaits the hand of the cultivator, to whom it will return "thirty, fifty, or an hundred fold." If he is a miner or mechanic, his hands shall find plenty of work, with liberal pay.

MINERAL RESOURCES OF MISSOURI.

BY PROF. G. C. SWALLOW,

FORMER STATE GEOLOGIST.

COLUMBIA Mo., September 20, 1870.

L. U. REAVIS, Esq. :

My Dear Sir : Your note requesting me to make out chapter on the *Mineral Resources* of Missouri for the new edition of your work, was duly received. I have attempted to comply with your request; but numerous previous engagements have rendered it impossible for me to make it as perfect and complete as I would wish.

Permit me to suggest that your article on this subject, in the first edition, is too valuable to be omitted in the future editions. Our minerals and our soils are the foundations of the argument, and upon these you can scarcely say too much.

I heartily wish you entire success in your great work, hoping ere long to congratulate you in the Mound City, when it shall have become the *Business Metropolis* and the *Political Capital* of the nation.

Very truly, your obedient servant,

G. C. SWALLOW.

There is no territory of equal extent on the continent which contains so many and such large quantities of the most useful minerals as the State of Missouri. In making this remark there is no desire to underrate the mineral resources of other States or of the adjacent Territories, but to announce the fact that some good fortune has set the boundaries of this State around a portion of country filled with an unusual amount of the mineral substances useful in the arts and manufactures, and that several of those most useful are found in such quantities that the supply is virtually inexhaustible. There are some that no demand for home consumption or for foreign supplies can exhaust within the time allotted for the rise, progress, and decay of nations.

Only small portions of the precious metals have been discovered in Missouri; nor is it desirable there should be. It is true that deposits of silver and gold concentrate populations very rapidly and yield many large fortunes; but history does not show that countries producing silver and gold have been permanently prosperous. Gold built up California very rapidly, and it is now filled with a great and prosperous people; but gold does not keep them there, nor does it induce the present immigration. The beautiful climate and wonderful agricultural resources are its present attractions.

Mexico and Peru have large and numerous deposits of precious metals; but they have never secured permanent prosperity, though peopled by what were the best races of Europe.

Spain has had vast quantities of gold and silver, both at home and in her foreign possessions, from the earliest antiquity; but the most prosperous nations of ancient and modern times have imported nearly all the gold and silver they have used. Gold mining has yielded many colossal fortunes, as to Croesus in ancient times, and to many familiar names of later date; still the great mass of those engaged in gold mining have lived poor and died poor. These results might be expected from the very nature of the business. Nine-tenths of all the labor spent in the search for and in mining gold meets with no reward, while some of it has been rewarded with signal success. All who engage in this business, therefore, have high expectations, and many spend their gains lavishly, live fast, and, if not successful, often become dissipated and worthless. Almost all other pursuits yield a reward which may be calculated with some degree of certainty, which gives stability and permanence and leads to regular habits and progress. These results become very marked in national character when examined in the light of history. Great Britain and Spain give a striking illustration. Scarcely three centuries have elapsed since the united crowns of Castile and Aragon ruled a more prosperous people than the thrones of Albion and Scotia. Spain extended her rule over the fairest portions of the New World and held the commerce of both hemispheres. Galleon after galleon, deeply laden with the precious metals from the mines of Mexico and Peru, filled the treasury of the government and the pockets of her people. England, on the other hand, was opening her mines of iron and coal and pushing her manufactories by all the appliances of science and art.

Spain has squandered her gold and become a mere pensioner on Cuba. But England now holds the commerce of both Indies, and the world pays a golden tribute to her iron and coal.

If Missouri will work up her iron and coal she may become as powerful and rich as England. She has more territory and better soil, more and better iron and quite as much coal.

People who work iron partake of its strong and hardy nature. They move the world and shape its destinies. The region tributary to St. Louis has far more of the very best varieties of iron ore than can be found available for any other locality in the known world; and the facilities for working these vast deposits are unsurpassed. The country is well watered; timber is abundant; and all is surrounded by inexhaustible coal beds. These facts alone will make St. Louis the great *iron mart* of the country.

SPECULAR OXIDE OF IRON.

This is one of the most abundant and valuable ores in the State. Iron Mountain is the largest mass observed. It is two hundred feet high and covers an area of five hundred acres, and is made up almost entirely of this ore in its purest form. The quantity above the surface of the valley is estimated at

200,000,000 tons. But this is only a fraction of the ore here, as it descends to unknown depths, and every foot of the descent will yield some 3,000,000 tons. Veins of this ore cut the porphyry at the shut-in, the location of the first iron furnace erected in this region. Fine beds of this ore were also found at the Buford ore-bed at the Big Boggy Mountains, at Russell Mountain, at the James iron-works, and other localities in Phelps county; and in sections two, three, ten, and eleven, of township thirty-five, range four, west, in Dent county, on the Southwest Pacific railroad, and in several other localities in that county. There are several important deposits in Crawford, Phelps, and Pulaski counties.

SILICIOUS SPECULAR OXIDE

Is found in very large quantities in Pilot Knob, where it is interstratified with slates and porphyry, as in the famous Iron Mountain near Lake Superior. The iron of Pilot Knob has been worked for many years. Its quality is as good as its quantity is great.

MAGNETIC AND SPECULAR OXIDE

Exists in large veins in the porphyry of Shepherd Mountain. It is very pure, and large quantities have been worked.

There is iron enough, of the very best quality, within a few miles of Pilot Knob and Iron Mountain to furnish one million tons of manufactured iron per annum for the next two hundred years. All these ores are well adapted to the manufacture of pig metal, and the most of them are suitable for making blooms by the Catelau process, and steel by the Bessemer.

BOG ORE

Has been discovered in beds several miles in extent in the swamps and cypresses of Southeast Missouri—in Scott, Mississippi, Dunklin, Pemiscot, and New Madrid counties, in quantity sufficient in itself alone to make Missouri the *great Iron State*.

HEMATITE ORES

Of good quality are very generally distributed over the southern part of the State, where it is often found in very extensive beds. Large deposits have been discovered in Cooper, St. Clair, Green, Henry, Franklin, Benton, Dallas, Camden, Stone, Madison, Iron, Washington, Perry, St. Francois, Reynolds, Stoddard, Scott, and Dent counties. The beds discovered in Scott, Stoddard, and Perry counties are very extensive and of good quality. The beds in the tertiary rocks of Scott county are not so good. In these beds of hematite alone Missouri has more iron than can be smelted in the present and succeeding generations.

SPATHIC ORE

Has been discovered in very extensive beds in the tertiary rocks of Scott county, where the ore is very pure. The coal measures of Missouri contain

many beds of spathic ore; and it is found in greater or less quantities throughout the entire area of 27,000 square miles covered by these rocks. These beds of ore are similar to many worked extensively in England and Pennsylvania; and, in the absence of the vast beds of other ores of better quality, they would attract more attention and be made productive.

Were it possible to exhaust the more available deposits in the State, the spathic ores of the tertiary and coal rocks could supply all the demands for iron for a long period.

In a chapter so limited it is impossible to mention all the hundreds of localities already discovered, to say nothing of the areas not yet explored. There are already recorded in the reports of the geological survey fifty-six workable beds in Green, Phelps, Maries, and Crawford counties alone, and good ore is still more abundant in the counties of the Southeast.

In other States there are many very extensive iron deposits, which will naturally gravitate toward St. Louis. Among them there are some very valuable in the Indian Territory, which our railroads will make available.

But the most extensive iron bed yet observed is on the Missouri river, cropping out in the bluffs on both banks of the river for a distance of more than twenty-five miles. These beds are on the river, and many million tons could be mined and put on boats for less than one dollar per ton; and the expense of carrying to St. Louis, down stream, would be very small.

Other localities might be mentioned, but we have shown the position of enough of the various varieties of iron ore to supply any possible demand of any possible manufacturing city for the next thousand years, and all is so located as to be tributary to St. Louis.

The simple fact that such quantities of iron ore do exist so near and in places so accessible, will compel this young and vigorous city to become *the Iron Mart*. The iron furnaces at Iron Mountain, Pilot Knob, Irondale, Moselle works, James works, St. Louis, and Carondelet, fifteen in all, with a capacity of 130,000 tons, and two rolling mills with a capacity of 40,000 tons, and the numerous foundries and machine shops, are the growth of a few years—a mere beginning of the great work of utilizing our iron ores. These will increase in a rapid ratio until a hundred furnaces pour forth the molten metal, a score of mills roll it into rails and bars and plates, and a hundred foundries mold it into the ten thousand shapes and forms demanded by human industry. Then shall we see the millenium of iron men, and our people be prepared to appreciate the value of our iron beds; and they will appreciate the justice of your noble tribute *to the pioneers of iron in Missouri*.

COAL.

Mineral coal has done much to promote the rapid progress of the present century. Commerce and manufactures could not have reached their present unprecedented prosperity without its aid; and no people can expect success in those departments of human industry unless their territory furnishes an abundance of this useful mineral. Previous to the geological survey it was known

that coal existed in many counties of the State, but there was no definite knowledge of the continuation of workable beds over any considerable areas; but since the geological survey commenced, the southeastern outcrop of the coal measures has been traced from the mouth of the Des Moines, through Clark, Lewis, Shelby, Monroe, Audrain, Boone, Cooper, Pettis, Henry, St. Clair, Bates, Vernon, and Barton, into the Indian Territory, and every county on the northwest of this line is known to contain more or less coal, giving us an area of over 26,000 square miles of coal beds in that part of the State. We have proved the existence of vast quantities of coal in Johnson, Pettis, Lafayette, Cass, Cooper, Chariton, Howard, Boone, Saline, Putnam, Adair, Macon, Carroll, Ray, Callaway, Audrain, and it is confidently expected that the counties to the northwest will prove to be as rich when fully examined. Outside of the coal-field as given above, the regular coal rocks also exist in Ralls, Montgomery, Warren, Callaway, St. Charles, and St. Louis, and local deposits of cannel and bituminous coal in Moniteau, Cole, Morgan, Crawford, Callaway, and probably other counties. Workable beds of good coal exist in nearly all places where the coal measures are developed, as some of the best beds are near their base, and must crop out on the borders of the coal-field. This is found to be the fact where examinations have been made. All of the little outliers along the border contain more or less coal, though the stratas are not more than forty or fifty feet thick. But, exclusive of these outliers and local deposits, we have an area of twenty-six thousand eight hundred square miles of the regular coal measures. If the average thickness of workable coal be one foot only, it will give 26,800,000,000 tons for the whole area occupied by coal rocks. But in many places the thickness of the workable beds is over fifteen feet, and the least estimate that can be made for the whole area is five feet. This will give over 134,000,000,000 tons of good available coal in our State. Such were our estimates of the coal in Missouri in 1855. Since then new beds have been opened in the area above designated and large tracts discovered in other parts of the State, along the whole line of the southeastern outcrop of the lower coal strata, from the mouth of the Des Moines to the Indian Territory. Along the lines of all the railroads in North Missouri, and along the western end of the Missouri Pacific, active and systematic mining has opened our coal beds in a thousand localities, and developed a series of facts which render it absolutely certain that our former estimate falls far below the real quantity in the State. Prior to 1855 no coal beds had been discovered on the Missouri river between Kansas City and Sioux City, save one or two thin beds in the upper coal measures, and practical men were slow to believe the geologist could detect the existence of coal beneath the surface. But some brave men at Leavenworth City have sunk a shaft to one of the lowest coal beds, 700 feet beneath their city, and more than 600 feet below the Missouri river at that point. The success of this enterprise proves the deductions of science that our lower coal beds, which crop out along the eastern boundary of our coal-field, from Clark county to Vernon, dip beneath the surface and extend to the west as far at least as Leavenworth, or beyond the western boundary of Missouri.

This and other similar developments prove to a moral certainty that our esti-

mate of the coal in the State at 134,000,000,000 tons is much too small. But since that is enough, we need not make new figures. But it is not the coal of Missouri alone which is tributary to St. Louis. The 12,000 square miles of coal measures in Kansas, as much more in the Indian Territory and Arkansas, and still larger areas in Iowa and Illinois and Kentucky, are so located as to form around St. Louis a circle of fuel at once accessible and inexhaustible. Coal is but one remove from the diamond; but that slight *difference* makes it vastly more valuable — *the motive power* of the world. Could all the millions of men on the earth live a thousand years, and put forth all their strength for that whole period, the power exerted would sink into insignificance when compared with the latent power inherent in this circle of coal-fields. What *crown*, then, can be more fitting for this Queen City than this circle of coal-fields, *gemmed* with mountains of iron.

ECONOMICAL VALUE.

In our efforts to appreciate the value of so vast a deposit of this most useful mineral and its influence on the growth of St. Louis, we should constantly bear in mind the position of these beds, beneath the soil of one of the richest agricultural regions on the continent, within a State whose manufacturing and commercial facilities and resources are scarcely inferior to any, and adjacent to the Mississippi and Missouri rivers, and the Pacific, the North Missouri, and the Hannibal and St. Joseph railroads.

With all these advantages of location, the certainty that these coal beds can furnish 100,000,000 tons per annum for the next thirteen hundred years, is a fact of the first importance to your city and its wonderful future. These coal beds contain nearly all known varieties of bituminous and cannel coals, such as are suited to almost all manufacturing purposes.

LEAD ORE.

The most important deposits of lead in Missouri are *galena*, or the *sulphuret of lead*. Carbonates of tin occur in considerable quantities, and sometimes small portions of other ores of this valuable metal are found. Our lead mines have been worked with great success for the last half century. It is true that the amount of mining done and the success at various points have been somewhat variable, as is always the case in mining operations when conducted and carried on by men who have but little capital and practical knowledge of the work, as ours have been in some considerable degree at least. Many of our mines have been neglected for various reasons; some on account of disputed titles; others from the general depression of the business; and others on account of the late military troubles. But there is no good reason to suppose our mines would be less productive now than at any previous period. Few or none have been exhausted, and many are now worked with greater success than at any previous time. All the facts encourage a more extended effort to work and more fully develop some of the neglected mines and open new ones.

Our space will not permit a detailed account of the lead mines of the State.

There are more than five hundred localities, old and new, that promise good returns to the miner. Two hundred and sixteen have been catalogued in my report on the Southwest Pacific railroad.

The Eastern Lead Region comprises a large portion of Franklin, Washington, Jefferson, Crawford, Phelps, Dent, Madison, St. Francois, Perry, St. Genevieve, and some parts of the adjoining counties, giving an area of some five thousand square miles.

The Southwestern Lead Region comprises a large portion of Newton, Jasper, and small tracts of the adjoining counties, making an area of about two hundred square miles.

The Osage Lead Region contains a considerable portion of Cole, Moniteau, Morgan, Benton, Camden, Pettis, Cooper, and Miller, and some of the adjoining counties — an area of about one thousand five hundred square miles.

The Southern Lead Region comprises portions of Taney, Christian, Webster; and probably other counties not yet surveyed on the south. The extent is not known, as that part of the State has not been fully examined; but there is at least one hundred square miles in the counties above named.

In the Eastern Lead Region.....	5,000 square miles.
“ Southwest’n “	200 “
“ Osage “	1,500 “
“ Southern “	100 “

In all these an area of.....6,800 square miles.

It is not to be supposed that these areas, large as they are, contain all the lead lands of the State.

We have not yet examined a single county south of the Osage and the Missouri, save in the swamp country, without finding in it more or less of this valuable mineral; and besides, nearly all these counties are underlaid by the true lead-bearing rocks of our State. We have, then, six thousand eight hundred square miles in which lead deposits in workable quantities have been found and successfully worked, and at least fifteen thousand square miles more of lead-bearing rocks, where we may reasonably expect to find valuable deposits of this mineral. Detailed descriptions of many of our lead mines may be found in the State Geological Reports.

Some have supposed our mines are like those in Illinois and other points on the Upper Mississippi, and that they would soon be exhausted. But the mines of Missouri are entirely different in many respects.

1. They are in entirely different formations. The lead mines in the Southwest and in Cooper county are in the lower carboniferous rocks, the same as the lead-bearing rocks of England, which have been worked so long with so much success; and the mines in the Eastern, Southern, and Osage lead regions of the State are in the calciferous sand-rock and Potsdam sandstone — rocks much older than the Galena limestone.

2. The lead-bearing rocks of Galena have a thickness of only about 100 feet, whereas the lead-bearing rocks of Missouri are more than 1,000 feet in thickness.

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3. The veins on the Upper Mississippi do not pass through into the formations above and below the lead-bearing limestone; they stop when they come to the sandstone. In Missouri the veins cut through the sandstone above and below the lead-bearing limestones, as at the Mount Hope mines.

4. In Wisconsin and Illinois there appear to be no true veins, whereas in Missouri there are many veins like the true veins of Cornwall.

These and other marked differences indicate the more permanent character of the Missouri mines. That they belong to the same class as the more permanent mines of England and Wales, is clearly shown by the following characteristics, which they possess in common with the best mining regions of the world. No one who is familiar with the geological features of the principal mineral regions of the globe can fail to observe the striking characteristics which our mineral region has in common with many of the most important in other parts.

1. Proximity to igneous or eruptive rocks. It is a well-known fact that nearly all the great mining regions of Great Britain, Russia, Hungary, Germany, Norway, France, South America, Mexico, and this country, are in regions adjacent to igneous rocks, like the mineral region just described. There are, however, some productive localities which are far removed from any known or exposed igneous rocks. The localities occupied by the *Kupfer Schiefer*, at Mansfeldt, the lead region of the mountain limestone in England, the Upper Mississippi lead region, those in the southwestern part of this State, and some others, seem to be exceptions to this rule. The mines in the most of these exceptional regions, though often rich and vastly productive for a time, have not proved so extensive and durable, as their mineral deposits seldom occur in true veins.

It may be remarked that some portions of the mineral region of Southeast Missouri are somewhat removed from Iron and Madison counties, the principal center of igneous action in this State; but we have good reason to believe that igneous rocks underlie this whole mineral region at no great depth, since they come to the surface in a few places, even on the outer borders of it, as in Crawford, Washington, St. Genevieve, Wayne, Shannon, and Texas counties. This fact being understood, this whole region, in its relation to igneous and eruptive rocks, is the peer of the most favored mining districts in the world.

2. The sedimentary rocks have been more or less fractured, tilted, and metamorphosed by those intrusive or igneous rocks, as shown by the metamorphic slates at Pilot Knob and in several places in Madison county. The same results have been produced on Lake Superior, in Cornwall, and in many other rich localities.

3. The several kinds of igneous rocks have been forced to the surface at several successive periods. This is true of our region, of Cornwall, and of other favored mining districts.

4. The ores occur in true veins, as in Cornwall and nearly all the best mines in the world.

5. Gossan, a porous oxide of iron, occupies the upper part of many veins, especially those of copper, in this, the Cornwall, and many other districts of

great mineral wealth. This cap of gossan—"chapeau de fer" of French miners, and "eiserne hut" of the Germans—is common in the best mining regions of Europe, Asia, and America—in France, Cornwall, Colorado, Montana, and Missouri. The German couplet expresses the popular opinion among miners:

"Es ist nie nicht Gang so gut,
Der trägt nicht einen eisernen Hut."

No vein is deemed so good
As one that has an iron hood.

6. Large eruptive masses of iron ore characterize many of the best mining regions, as in the Ural Mountains, Norway, Sweden, Lake Superior, and Missouri. These mountain masses are not always in the immediate vicinity of the other ores, but they are intimately connected with the disturbing forces which have produced the mineral veins.

7. As a general rule, the true veins of this region do not possess such well-marked and extensive selvages as this variety of lodes usually do; but, like the true veins of Cornwall, their gangue is usually connected with or cemented to the wall-rock.

8. In many of the best mining regions there are two sets of veins—one running nearly north and south, and the other nearly east and west. One set is usually more productive than the other.

In Missouri there is an approximation to this. The true veins of Franklin county usually run north and south, but there are others which run east and west, as on Mineral Branch, or Lead Run, near the Bourbeuse. These east and west veins contain some galena and tiff, but they have not been sufficiently explored to prove their value.

In Cornwall the east and west veins are the most productive, whereas in Brittany the north and south veins are the richer.

Beside these eight most important characteristics of the best mining districts, our mining region has others in common with them all; but I will not enlarge upon this part of the subject further than to mention a few particulars in which this region is strikingly like that so renowned in Cornwall:

Igneous or eruptive rocks play a conspicuous part in each region. Both have *granite knobs and ridges*; both *green stone and syenitic trap dykes*. Both have *metamorphic slates*, the "killas" of the Cornish miners. Both have *intrusive masses of porphyry*, or *porphyritic dykes*, the "eleraus" of the Cornish miners. Both have *true veins*, in which the vein-stone is usually cemented to the wall-rock without any selvages. Both have *veins with gossan caps*. Both have veins containing *copper, iron, lead, zinc, cobalt, nickel, and silver*. Both have about the same varieties of the ores of copper and some other metals. Both have about the same *elevation above the ocean*. Both have *similar topographical developments*.

The lead mines of Arkansas and the Upper Mississippi send their products to St. Louis. The English mines also send their tribute, as will the ten thousand lead veins of Colorado and Montana.

COPPER.

This metal is found in many localities in the State. Several varieties of copper ore exist in the Missouri mines. The copper mines of Shannon, Madison, and Franklin counties have been known for a long time. Some of those in Shannon and Franklin were once worked with bright prospects of success, and some in Madison have yielded good results.

Deposits of copper have been discovered in Dent, Crawford, Benton, Maries, Green, Lawrence, Dade, Taney, Dallas, Phelps, Reynolds, and Wright counties. But the mines in Franklin, Shannon, Madison, Crawford, Dent, and Washington give greater promise of yielding profitable results than any other yet discovered. When capitalists are prepared to work these mines in a systematic manner, they may expect good returns for the money invested.

ZINC.

Sulphuret of zinc is very abundant in nearly all the lead mines in Southwestern Missouri, particularly in those mines in Newton and Jasper, in the mountain limestone. The carbonate and the silicate occur in the same localities, though in much smaller quantities. The ores of zinc are also found in greater or less abundance in all the counties on the southwestern branch; but the distance from market and the difficulties in smelting the most abundant of these ores, the sulphuret, have prevented the miners from appreciating its real value. It often occurs in such large masses as to impede very materially the progress of mining operations. For this reason *black-jack* is no favorite with the miners of the Southwest. Many thousand tons have been cast aside with the rubbish as so much worthless matter; but the completion of the Southwestern railroad will give this ore a market value and convert into valuable merchandise the vast quantities of it which may be so easily obtained in Jasper, Newton, and other counties of the Southwest. Considerable quantities of the sulphuret, carbonate, and silicate also occur in the eastern lead regions. At Perry's mine, at Mount Hope mine, and at a locality near Potosi, these ores exist in some considerable quantities.

Little has been done to test the value of the ores of zinc in these and other localities in the State; but a beginning has been made with promising results. There is an extensive vein of calamine in Taney county, which will doubtless prove very valuable.

COBALT

Exists in considerable quantities at Mine La Motte. It has been found in one other locality. It will doubtless be discovered in other places.

NICKEL

Is also worked at Mine La Motte in considerable quantities.

MANGANESE.

The peroxide of manganese has been found in several localities in St. Genevieve and other counties.

SILVER

Occurs in *small quantities* in nearly all the lead mines in the State, in combination with the ores of that metal.

GOLD,

Though often reported in large quantities in sundry localities, has never been worked to any considerable extent in any part of the State.

TIN.

Ores said to have large quantities of tin have attracted much attention, and much money and labor have been spent in efforts to mine and reduce them; but the results are unknown to the writer. Flattering reports have been made of the yield at some localities

PLATINUM.

Some parties have reported platinum in small quantities in the dykes of Madison county.

MARBLE.

Missouri has numerous and extensive beds of marble of various shades and quantities. Some of them are very valuable, and will become a very important item in our resources.

Fort Scott Marble is a hard, black, fine-grained marble, with veins of yellow, buff, and brown. It receives a fine polish, and is very beautiful. It belongs to the coal measures, and is found in several places in Kansas near the Missouri line, and doubtless extends into Missouri. There are several beds in the St. Louis limestone, in St. Louis county, which have attracted some attention as fine marbles. Some of them are very beautiful and durable.

The fourth division of encrinital limestone is a white, coarse-grained, crystalline marble of great durability. It crops out in several places in Marion county. One of the best localities is in the bluffs of the Mississippi, between McFarland's branch and the Fabius. The lithographic limestone will furnish a hard, fine-grained, bluish-drab marble, that would contrast finely with white varieties in tessellated pavements for halls and courts.

The Cooper marble of the Onondaga limestone has numerous pellucid crystals of calcareous spar disseminated through a drab, or bluish-drab, fine, compact base. It exists in great quantities on the La Mine, in Cooper county, on Lee's creek, and in some other places in Marion county. It is admirably adapted to many ornamental uses. There are many extensive beds of fine variegated marbles in the upper silurian limestones of Cape Girardeau county. They crop out in many places extending from Apple Creek, on the northern boundary of the county, to Cape Girardeau, and thence along the bluffs facing the swamps to the southwest. Cape Girardeau marble is also a part of the Trenton limestone located near Cape Girardeau. It is nearly white, strong and durable.

There are several beds of very excellent marble in the magnesian limestone series. In sections thirty-four and thirty-five of township thirty-four, range

three, east, are several beds of semi-crystalline, light-colored marbles, beautifully clouded with buff and flesh colors. They receive a fine polish; are durable and well fitted for many varieties of ornamental work and building purposes. But one of the most desirable of the Missouri marbles is in the third magnesian limestone, on the Niangua. It is a fine-grained, crystalline, silico-magnesian limestone, light drab, slightly tinged with peachblossom, and beautifully clouded with deep flesh-colored shades. It is twenty feet thick, and crops out in the bluffs of the Niangua for a long distance. This marble is rarely surpassed in the qualities adapted to ornamental architecture.

There are also several other beds in this and the other magnesian limestones. Some are plain, while others are so clouded as to present the appearance of breccias. The beautiful Ozark marbles are well known. Some of them have been used in ornamenting the Capitol at Washington and for other purposes. Wherever the magnesian limestones come near the igneous rocks we may expect to find them so changed as to present beds of these beautiful variegated marbles.

LIMESTONES.

There is a great variety of excellent limestones in all parts of Missouri and in many localities in the adjacent States, which will furnish any quantity of the best materials of that class for building purposes. Some of these limestones have been much used, and others will supply the increasing demand as the means of transportation are extended to interior localities.

HYDRAULIC LIMES

Are abundant in numerous localities. Some of them have been tested with good results. The middle beds of the vermicular sandstone in Cooper and Marion counties are hydraulic.

The upper beds of the lithographic limestone in Marion, Ralls, and Pike counties possess marked hydraulic properties; and several limestones in Cape Girardeau county appear to be hydraulic.

The upper beds of the Chouteau limestone in Boone, Cooper, Moniteau, Pettis, and other counties, are in the highest degree hydraulic. They resemble the hydraulic strata at Louisville. The upper and lower strata of the Hudson river group have the same properties. The same is true of some portions of the magnesian limestone series as developed in some parts of South Missouri. From some of these sources we may confidently expect an abundant supply for home consumption and all demands for exportation.

GYP SUM.

Though no extensive beds of gypsum have been found in Missouri, there are vast beds of the pure white crystalline variety on the line of the Kansas Pacific railroad, on Kansas river, and on Gypsum creek. It is also found in several other localities accessible to St. Louis by both rail and boat, as at Fort Dodge in Iowa, and on the Republican and Blue rivers in Kansas.

CEMENT.

All of the limestone formations in the State, from the coal measures to the fourth magnesian, have more or less strata of very nearly pure carbonate of lime, which will consequently make good quick-lime. But few, if any, of the States have such an abundance and so general a distribution of this important article of domestic use.

CLAYS,

Suitable for potters, are worked in many localities in the State. There will be no lack of this material.

Kaolin has been discovered at a few places, and worked at one or two.

Brick clays have been discovered and worked in nearly all the counties where there has been a demand for them. The argillaceous portions of the bluff formation make good brick, as shown in the brickyards of nearly all the towns on our large rivers where this formation abounds. The brickyards of St. Louis are supplied from this source.

FIRE-BRICK

Are manufactured from the fire-clays of the lower coal series in St. Louis county. These bricks have the reputation of possessing fine refractory properties. There are many beds of fire-clay in the coal measures. Some beds of the Hudson river group in Ralls and Pike counties, of the Hamilton group in Pike and Marion, and of the vermicular sandstone and shales on North river, seem to possess all the qualities of the very best fire-clays. The quantity of these clays is great, almost beyond computation. No possible demand could exhaust it.

FIRE-ROCK

Has often been observed. Some of the more silicious beds of the coal measures are very refractory, as many have discovered. The upper strata of the ferruginous sandstones, some arenaceous beds of the encrinital limestone, the upper part of the Chouteau limestone, and the fine-grained, impure beds of the magnesian limestones, all possess qualities which will enable them to withstand the action of fire. But the second and third sandstones are the most refractory rocks yet examined. They are used in the furnaces at Iron Mountain and Pilot Knob.

PAINTS.

There are several beds of purple shales in the coal measures which possess the properties requisite for paints used in outside work. Numbers ten, thirty-one, and fifty, of this formation have shades of a bright purple color, and a firm texture; but number ten possesses the best qualities. Yellow and red ochres are found in considerable quantities. Some of these paints have been thoroughly tested by the Hon. Geo. S. Park and others, who have found them fire-proof and durable. These beds are on the Missouri river.

ROAD MATERIALS

In any desirable quantity may be obtained in the drift formation and in the creeks and rivers of all parts of the State.

GRANITE.

There is an abundance of coarse reddish granite in several counties. Some of these will make admirable stone for heavy, massive structures.

SANDSTONES,

Of various shades of buff, red, and brown, occur in all the geological systems of the State. Many of them are firm and durable, and they present colors suited to various styles of architecture.

This brief and general view of the deposits of useful minerals in the country tributary to St. Louis shows that Nature has been lavish of the materials necessary for the growth and stability of a great city. If, in connection with these vast and varied mineral products, we take into the view the well-known facts that Missouri and the adjacent States possess soils of wonderful fertility, and in varieties suited to all the staple crops and fruits of the temperate zone; that the whole region is intersected by rivers and creeks, and watered by countless living springs; that it is groaning beneath boundless forests of nearly every variety of the best timber on the continent; that numerous railroads and ten thousand miles of river navigation center here; that we are in the great highway of the moving populations of both hemispheres, we shall have more of the causes and conditions of growth, wealth, and permanence than have ever surrounded any city of ancient or modern times.

MISSOURI AS A WINE-PRODUCING STATE.

BY L. D. MORSE, M.D.,

PRESIDENT MISSISSIPPI VALLEY GRAPE GROWERS' ASSOCIATION.

It is a little over twenty years since grape culture was commenced as a business in Missouri, since which it has steadily increased, and rapidly so within the latter half of the period. During the last five years the increase has been at the rate of about 300 acres per year. Within the period last named, several companies have been formed for producing wine on a large scale. The Cliff Cave Wine Company, in the south part of St. Louis county, has about twenty-five acres of vines, sold a large quantity of grapes last year, and made 3,000 gallons of wine. The Augusta Wine Company, of St. Charles county, has 22,775 vines, and made last year 8,000 gallons of wine. The Bluffton Wine Company, of Montgomery county, has 59,834 vines, and made last year from the portion in bearing 13,490 gallons of wine. The Missouri Smelting and Mineral Land Company, of Stanton, Franklin county, is engaged in grape growing as a portion of its business, and has about seventy acres of vines planted, nearly all of which are in bearing this year.

In addition to the foregoing, we have the American Wine Company, of St. Louis, started several years earlier. It does not depend upon raising grapes for wine, but buys largely, and claims to have made last year over 100,000 gallons of still wines, and half a million bottles of champagne.

The vineyards of the town of Hermann yielded last year over 150,000 gallons of wine, and about 85,500 pounds of grapes sold, the total value of both being estimated at \$157,557.

In the Report of the Department of Agriculture for 1868, partial reports from nineteen counties are given, the average footing to 1,508. Statistics obtained last year by the Mississippi Valley Grape Growers' Association, entirely reliable so far as they go, indicate that there are about 3,000 acres of vineyards in the State, and the entire value of the grape product of the State this year will not be less than \$3,000,000.

SUPERIORITY OF MISSOURI GRAPES AND WINES.

It is not so much, however, the *number* of acres planted during the last few years, as it is the more or less favorable results from those in bearing, and the comparative quality of the fruit and wines produced therefrom, which tend to determine the question of superiority of our State above most others.

What little statistical information has been gathered thus far on this subject, and the very imperfect statements and incorrect figures given in the various reports, including that of the U. S. Agricultural Department, make it impossible to give reliable comparisons; but even this last named report shows that the average produced per acre in Ohio was 3,745 lbs. grapes, or 320 gallons wine; it was in New York 4,571 lbs. grapes, or 416 gallons wine; and in Missouri 6,900 lbs. grapes, or 483½ gallons wine. A more reliable proof of the superiority of Missouri's grapes over all others, we find by comparing the strength of the must by Oechsle's must-scale, which always comes out in favor of Missouri, even against the most celebrated wine localities of the Union. This is due to climate and soil. Rev. Chas. Peabody, who has given much attention to the investigation of this subject, says: "The two important natural conditions demanded by the grape are climate and soil. Given these two, all the rest will eventually follow from the application of the skilled industry of the vine-dresser. In this portion of the Valley of the Mississippi, we find these two elementary conditions, climate and soil, existing together. That the soil and climate of Missouri and the adjacent parts of other States, especially those on its eastern and western boundaries (Illinois and Kansas), are eminently adapted to the growth of the grape, is a point too well established to need discussion here. The fact is well known and universally acknowledged throughout the entire district, and perhaps I may venture to add, throughout the United States. Compared with other sections of the United States (at least all those east of the Rocky Mountains), so far as their capabilities have been tested, our advantages for the production of wine are certainly superior."

We have not the space to show by the isothermal lines, ascertained by years of actual observation, that our mean temperature during the various seasons comes nearest to those most celebrated places in France where the grape is known to succeed, and must confine ourselves to but few data, of which the following tables, extracted from essays read before the Mississippi Valley Grape Growers' Association, will afford a ready comparison:

<i>Place.</i>	<i>Aug. deg.</i>	<i>Sept. deg.</i>	<i>Oct. deg.</i>	<i>Av'ge deg.</i>
Cleveland.....	70.3	64.0	51.3	61.68
Cincinnati.....	74.2	66.0	53.2	64.47
St. Louis.....	76.5	68.7	55.4	66.86

For the highest development of the wine properties of the grape a mean temperature of no less than 65° Fahrenheit is demanded during the season of ripening. In the tables above alluded to we find the following:

	<i>April, May and June.</i>		<i>Average of July, Aug. and Sept.</i>		<i>Six months.</i>	
	<i>deg.</i>	<i>in.</i>	<i>deg.</i>	<i>in.</i>	<i>deg.</i>	<i>in.</i>
Kelly's Island, O., 1867.....	57.3	3.18	72.0	1.54	64.6	2.36
St. Louis, Mo.....	63.7	3.95	75.1	1.65	69.4	2.80
Marseilles, France.....	63.4		72.1		67.7	

Besides the high temperature, a diminished rain-fall during the same season is essential to the perfection of the grape. Dr. Stayman, of Leavenworth,

Kansas, in an able discussion of these meteorological influences, comparing the averages of Illinois, Missouri and Kansas with those of New York, New Jersey and Pennsylvania, for 1867, finds a difference of 4.14° more heat and 6.45 inches less rain for the months of July, August and September, and for the whole period 7.20° more heat and 10.38 inches less rain in favor of the Western States.

Wherever Missouri wines have been tested, in comparison with those of other States, either at home or abroad, they have almost invariably taken the highest rank. At the meeting of the American Pomological Society, held in St. Louis in September, 1867, there was a large exhibition of American wines, including twenty varieties, from various States. The committee on Catawba wines, using a scale of 100 to designate degrees of excellence, rated the best Missouri sample at 95, and other samples from this State at 90, 84, &c. The highest from any other State was Illinois, 83; the best, from Ohio, was rated at 70. These were still wines. The sparkling Catawba of the American Wine Company, of St. Louis, were rated one and two degrees higher than samples from the celebrated Longworth Wine House, of Cincinnati. The committee was composed of two gentlemen from Ohio and one from Washington.

At the Paris Exposition, the American Wine Company's champagne was awarded honorable mention, and diploma sent them on account of its fine flavor, although the French jurors remarked it had *too much* of the fruity taste. The German jurors, accustomed to wines of high bouquet and flavor, were very much pleased with the American wines which possessed these qualities. The American committee, consisting of the Hon. Marshall P. Wilder, Alexander Thompson, William J. Flagg, and Patrick Barry, said: "From what comparison we have been able to make between the better samples of American wines, on exhibition at the Paris Exposition, with foreign wines of similar character, as well as from the experience of many European wine-tasters, we have formed a higher estimate of our own ability to produce good wines than we had heretofore." Wines which have since repeatedly been sent to Germany from Missouri have been highly spoken of, and were pronounced very superior wines by the best connoisseurs. It is also a notable fact that the trade in native wines has assumed such proportions in *St. Louis*, that even her importers of foreign wines, who have heretofore strongly disfavored any others, feel now compelled to buy and keep always on hand the Catawba, Concord, and Norton's Virginia.

There are several other varieties that are destined to take high rank, but have not yet been made in sufficiently large quantities to become well known. There are about seventy-five varieties of native grapes in cultivation and on trial in the State. About one-third of this number may be considered as well tested, and more or less successful.

Our Concord wine is becoming more and more popular, and should take the place of imported clarets. It suits the uncultivated taste better than either elaret or Catawba. The Norton's Virginia, as it becomes better known, is more and more esteemed for its valuable tonic and astringent qualities. As a medicinal wine, it is not excelled probably by any wine, native or imported.

Catawba has generally been considered too acid by those unaccustomed to it, but it makes an exceedingly wholesome and palatable summer drink, and is especially admired in the form of Catawba cobbles. When made into sparkling wine or champagne, it has a very agreeable bouquet, and is preferred by those who become accustomed to it to the best imported champagne. It is purer, contains less alcohol, and is rapidly superseding them.

WINE CONDUCTIVE TO HEALTH AND TEMPERANCE.

Taking into consideration the fact that the manufacture of wine is yet in its infancy in this country, the above results indicate that it is rapidly attaining a prominent place among the leading industrial pursuits, and materially aiding the cause of temperance by decreasing the consumption of distilled and fortified liquors. On this point an intelligent writer says :

“Of the good or evil effects of drinking pure wine, Americans have small means of judging. The dogmas of total abstinence have been built upon facts existing in two countries where pure wine is an almost unknown thing—upon British and American facts. Not in France, not in Spain, or Portugal, or Italy, or Switzerland, or South Germany, are gathered the awful statistics of the temperance lecturer ; but from Britain, from America, and other countries where a kind of necessity, or at least a controlling fatality, has led to the using as a beverage what in grape-growing countries is hardly known save as medicine.

“The advocates of abstinence, having made out their case against distilled spirits, demand judgment against wine also. Having shown that drinking whisky or rum tends in a dangerous degree to make men drunkards, they jump to the conclusion that wine drinking must also tend in a like degree to the same calamitous result. By such reasoners it is assumed :

“*First*, that alcohol as found in distilled spirits, and alcohol as found in wine that has not been distilled, exists in both cases under identically the same conditions, and has on the drinker the same effects.

“*Secondly*, that foreign wines which are usually consumed in America and Britain are the same as what the people of the countries which produce them drink at home, and the same as what we should drink in case we grew our own wines at home.

“But distilled and undistilled alcohol exist under very different conditions and have very different effects. And to reason from Port, Sherry, and Madeira, and other liquors that come to us in ships, to the wines that will spring from our own soil, if our vine culture be blessed, is by no means admissible. Simple alcohol is not a drink at all. It is never taken without a large admixture of water, and usually of other substances. Brandy, whisky and rum contain nearly as much water as they do of alcohol, even before being diluted for drinking ; while wine is in its nature a very delicate combination of various ingredients, with all of which we are not yet fully acquainted. Alcoholic drinks, then, being essentially compounds either naturally or artificially formed, they cannot be fairly judged without considering the properties of the substances which compose them, the proportions they bear to each other, and

the manner in which they combine. And to assert that the alcohol which condenses in the worm of the still from the vapor of boiling wine is the very same thing to the drinker of it—to his stomach, brain and nerves—that it would have been if it had remained united with all those other constituents, with the sugar, acids, tannin, resin, salts and ethers which were its companions in the vine sap, were elaborated with it in the leaf, and ripened with it in the grape, is to say what requires the strongest proof to sustain it. But no such proof exists, while the contrary can be abundantly shown.”

As conducive to health, our light wines possess a special value deserving of more general appreciation. It has been said, with too much truth, that we are a nation of dyspeptics. For the cause of the frequency of dyspepsia, we may rationally look to the habit of eating fast, bolting the food in a half-masticated condition, drinking too largely of water and other liquids, the too common use of salt meat, particularly salt fat pork, among the hard-working classes, &c. There is a large portion of our population who, although not confirmed dyspeptics, are yet persons of feeble digestive powers—a condition sometimes brought upon themselves by their own improprieties or bad habits, and quite as often inherited from parents, for the progeny of such people are sure to inherit the “family failing.” Now it generally happens that this class of people are under the necessity of accomplishing more work, either bodily or mental, than they are physically capable of doing without loss of vigor. Their powers of assimilation are unequal to the task of appropriating of each meal sufficient to meet the interstitial destruction or necessary out-goings of the system. Hence, they are always overworked, and live a life of fatigue. Their muscles are soft and flabby, and their vessels deficient in tonicity. They are liable to disease from various causes; the circulation in the extreme vessels being weak, they are unable to resist the effects of cold, and are hence liable to congestions. They have no power to resist malaria or contagious diseases. Under a feeling of relaxation and fatigue, they often resort to distilled spirits to their injury.

It is certain that the habitual daily use of a small allowance of such a stimulus as our pure wines afford, would bestow upon such persons the nervous energy necessary to enable them to digest more food—to economize the waste of the system—to perform the duties of life with more ease and comfort, and would make them more useful members of society instead of the mere drones they often are and must continue to be under a total abstinence regimen. It would also better enable them to resist disease, which is an important consideration in malarious districts. When moderately taken with a regular meal, the small amount of stimulus contained in the light wines is very little felt; no unnatural appetite is created for such stimulus, but rather a feeling of satiety is produced, digestion is aided, the wants of the system are better supplied, and there is less inclination or craving for stimulus between meals. This would be particularly the case with the class referred to, who need “wine for the stomach’s sake.” As wine would enable the body to appropriate more food and gain strength, the feeling of fatigue, with the instinctive craving for stimulus, would be removed.

While people continue to drink for the sake of drinking, by all means give them the least dangerous article. Let it be more abundant and cheaper than the more fiery and maddening compounds.

NOTE.—The American Wine Company has made during the present year 100,000 gallons of wine, and from the vintage of 1870 will put up about 750,000 bottles of Imperial champagne. The increased production by other companies furnishes the most favorable showing, for the rapid growth and increase of the grape and wine business of the State of Missouri.

Advancing civilization must necessarily stimulate and develop mechanical industry, by subordinating and bringing into practical use the metals and other materials of nature, for the benefit of man. Such is a wonderful feature in American civilization. Everywhere, upon the broad domain of the continent, art and interest are rapidly creating foundries and factories. But a few years ago, the "Helper Book" called the attention of mankind, to behold the contrast between the dispoiling power of slavery and the quickening power of liberty, to be seen in the slave border States and in the free border States. The author, to make his work more effective, made the contrast by States. Missouri and Illinois, were put in contrast, and the world asked to behold the misfortune of the one and the glory of the other. But how stands the account to-day. Stripped of slavery, Missouri wanted but an opportunity and she would rise superior to Illinois, as the figures below demonstrate. She was behind in 1860. She is ahead in 1870. She now ranks fifth as a manufacturing State, and will soon be the first.

Table showing the manufacturing industry totals of the United States in 1860 and 1870, with rank of States and rate of increase.

Rank in 1870.	STATES.	Amount in 1870.	Rank in 1860.	Amount in 1860.	Rate per cent. of increase.	REMARKS.
1	New York.....	\$785,194,651 00	1	\$378,870,039 00	107	nearly 1,627,608,511
2	Pennsylvania.....	712,178,944 00	2	290,121,188 00	146	do 1,647,687,128
3	Massachusetts.....	553,912,568 00	3	255,545,922 00	117	do 1,199,787,099
4	Ohio.....	269,713,610 00	4	121,691,148 00	122	do 597,685,351
5	Missouri.....	206,213,429 00	11	41,782,931 00	394	do 1,017,663,272
6	Illinois.....	205,620,672 00	8	37,580,886 00	257	
7	New Jersey.....	169,237,732 00	6	76,306,104 00	162	
8	Connecticut.....	161,005,474 00	5	81,924,555 00	97	
9	Michigan.....	118,394,976 00	17	32,658,356 00	262	
10	Rhode Island.....	111,418,354 00	13	40,711,296 00	173.6	
11	Indiana.....	108,617,278 00	10	42,803,469 00	153.7	
12	Maine.....	79,497,521 00	14	38,193,254 00	108.1	
13	Wisconsin.....	77,214,326 00	18	27,749,467 00	177.1	
14	Maryland.....	76,593,913 00	12	41,733,157 00	83.6	
15	New Hampshire.....	71,038,459 00	16	37,586,453 00	89	
16	California.....	66,594,556 00	7	68,253,228 00		Decrease 24 $\frac{1}{2}$ cent.
17	Kentucky.....	54,625,809 00	15	37,931,251 00	4	
18	Iowa.....	46,234,322 00	24	13,971,325 00	230.2	
19	Virginia.....	38,364,322 00	9	50,652,124 00	See West Va.	One state in 1860.
20	Tennessee.....	34,302,626 00	19	17,987,225 00	91.4	
21	Minnesota.....	33,110,700 00	32	3,373,172 00	881.6	
22	Vermont.....	32,184,606 00	23	14,637,897 00	119.8	
23	Georgia.....	31,196,115 00	20	16,925,564 00	84.3	
24	Louisiana.....	24,161,905 00	22	15,587,473 00	35	
25	West Virginia.....	24,118,051 00			23.3	
26	Delaware.....	16,791,382 00	26	9,892,902 00	70.7	
27	Nevada.....	15,870,539 00				Not reported in '60.
28	Alabama.....	12,040,614 00	25	10,588,566 00	13.7	
29	Kansas.....	11,775,823 00	31	4,357,408 00	170.2	
30	Texas.....	11,517,302 00	29	6,577,292 00	75.1	
31	District Columbia.....	9,292,173 00	30	5,412,102 00	71.6	
32	Mississippi.....	8,154,755 00	28	6,590,687 00	33.5	
33	Oregon.....	6,877,387 00	33	2,976,761 00	131	
34	Nebraska.....	5,798,512 00	39	697,328 00	844.8	
35	Florida.....	4,685,493 00	35	2,457,969 00	91.4	
36	Arkansas.....	4,629,231 00	34	2,880,578 00	60.7	
37	Colorado.....	2,852,820 00				Not reported in '60.
38	Washington.....	2,831,052 00	36	1,606,921 00	102.6	
39	Montana.....	2,494,516 00				Not reported in '60.
40	Utah.....	2,343,019 00	38	900,153 00	160.2	
41	North Carolina.....	1,931,327 00	21	16,768,696 00		Decrease 88.4 $\frac{1}{2}$ ct.
42	New Mexico.....	1,489,868 00	37	1,249,123 00	19.2	
43	Idaho.....	1,047,614 00				Not reported in '60.
44	South Carolina.....	985,898 00	27	8,615,195 00		Decrease 88.5 $\frac{1}{2}$ ct.
45	Wyoming.....	763,424 00				Not reported in '60.
46	Arizona.....	185,410 00				do do do
47	Dakota.....	178,570 00				do do do

CENSUS OF THE STATE OF MISSOURI.

A Complete Exhibit—Returns of each County as Certified by the Census Superintendent.

Counties.	Pop'n.	Counties.	Pop'n.
Adair.....	11,449	Livingston.....	16,730
Andrew.....	15,137	Macon.....	23,230
Atchison.....	8,440	Madison.....	5,849
Audrain.....	12,307	Maries.....	5,915
Barry.....	10,373	Marion.....	22,504
Barton.....	5,087	McDonald.....	5,226
Bates.....	15,960	Mercer.....	11,557
Benton.....	11,322	Miller.....	6,616
Bollinger.....	8,162	Mississippi.....	4,982
Boone.....	20,765	Moniteau.....	11,335
Buchanan.....	35,109	Monroe.....	17,149
Butler.....	4,298	Montgomery.....	10,405
Caldwell.....	11,390	Morgan.....	8,434
Callaway.....	19,202	New Madrid.....	6,357
Camden.....	6,108	Newton.....	12,821
Cape Girardeau.....	17,558	Nodaway.....	14,751
Carroll.....	17,445	Oregon.....	3,287
Cass.....	19,296	Ozark.....	3,363
Carter.....	1,455	Osage.....	10,793
Cedar.....	9,474	Pemiscot.....	2,059
Chariton.....	19,135	Perry.....	9,877
Clark.....	13,667	Pettis.....	18,706
Clay.....	15,564	Phelps.....	10,506
Clinton.....	14,663	Pike.....	23,076
Cole.....	10,292	Platte.....	17,352
Cooper.....	20,692	Polk.....	12,445
Christian.....	6,707	Pulaski.....	4,714
Crawford.....	7,982	Putnam.....	11,217
Dade.....	8,683	Ralls.....	10,510
Dallas.....	8,383	Randolph.....	15,908
Davies.....	14,410	Ray.....	18,700
DeKalb.....	9,858	Reynolds.....	3,756
Dent.....	6,357	Ripley.....	3,175
Douglas.....	3,915	St. Charles.....	21,304
Dunklin.....	5,982	St. Clair.....	6,742
Franklin.....	30,098	St. Francois.....	9,741
Gasconade.....	10,093	Ste. Genevieve.....	8,384
Gentry.....	11,607	St. Louis.....	351,189
Greene.....	21,549	Saline.....	21,672
Grundy.....	10,567	Schuyler.....	7,987
Harrison.....	14,635	Scotland.....	10,670
Henry.....	17,401	Scott.....	7,317
Hickory.....	6,452	Shannon.....	2,339
Holt.....	11,652	Shelby.....	10,119
Howard.....	17,233	Stoddard.....	8,535
Howell.....	4,218	Stone.....	3,253
Iron.....	6,278	Sullivan.....	11,908
Jackson.....	55,041	Taney.....	4,407
Jasper.....	14,929	Texas.....	9,618
Jefferson.....	15,380	Vernon.....	11,246
Johnson.....	24,649	Warren.....	9,673
Knox.....	10,974	Washington.....	11,719
Laclede.....	9,380	Wayne.....	6,068
Lafayette.....	23,623	Webster.....	10,434
Lawrence.....	13,067	Worth.....	5,004
Lewis.....	15,114	Wright.....	5,684
Lincoln.....	14,073		
Linn.....	15,900		
		Total.....	1,717,258

LEADING CITIES OF MISSOURI.

THE CITY OF BOONVILLE, MO., AND COOPER COUNTY, IN BRIEF HISTORY, ADVANTAGES, MANUFACTURING INDUSTRY, ETC.

The early history of Boonville, the county seat of Cooper county, the county itself and surrounding country, comprising in itself a partial history of the early settlement of the Territory of Louisiana and State of Missouri, is replete with interest to the historian of the Great West, abounding as it does, with "early life on the frontier;" with its Indian war; its stockade rally of settlers in time of danger, its lone, hand-to-hand fights of traders and settlers against aborigines; the steady, earnest growth of the country known now as Central Missouri; and its present proud position as one of the richest, loveliest, and best portions of Missouri and the Great West, cannot be compiled in a few printed pages, and do justice to the subject.

The reported rich mines of gold and silver in this vicinity, early in the eighteenth century, attracted the attention of the earliest French settlers. In 1712, letters-patent, to a distinguished French gentleman named Crozat, were granted, and in 1817, the great "Mining Company of the West" was formed and the country visited and worked. Along the Blackwater and Lamine, in this county, considerable work was done, but the style of mining was superficial and, as proved now, with but little result. In 1717 these letters-patent were returned to the crown.

In 1762 the territory west of the Mississippi was ceded by the French to Spain, but the French claimed the territory now embraced by the State of Missouri. Disputes occurred until about 1812, when, in midsummer, a territorial organization was formed, and Col. M. Lewis—the companion of Gen. Clark on the Missouri exploration—became Governor. In 1820 the territory became a State.

Meanwhile the Boonslick country began to attract the attention of what few emigrants dared to come this far west, and in 1806 Samuel Boone, accompanied by a few settlers, came to what is now known as Howard county, but embracing Cooper county and a section of country full sixty square miles in extent. Capt. Cole, Sarshall Cooper, Wm. Head and Daniel Boone were among the leading spirits of that day.

Old Franklin was laid off as a town, opposite the bluff and plateau now occupied by the prosperous city of Boonville, and was for years the most promising village northwest of St. Louis, on the Missouri River.

Boonville, in 1817, numbered about thirty families. A county was laid off extending down to the Osage, and embracing what now comprises Cole, Cooper,

Pettis, Benton, Moniteau, Morgan, Saline, and one or two more counties. Cole's Fort was established here for the protection of settlers. In 1819 the city of Boonville was laid off by Capt. A. Morgan and Charles Lucas. For years it progressed. Old Franklin gradually melted away under the encroachment of the river. Gradually and steadily Boonville continued to grow, receiving for years the great wealth of trade that came to it as an outfitting point for the Santa Fe and Mexican trade.

Now its population numbers about 6,000. The area of the county is 362,880 acres, with a total population of about 28,000. It is watered by the Missouri, Lamine, Blackwater, Petite Saline, Moniteau and other streams, amounting to from four to six hundred miles of country which is admirably adapted to nearly all classes of manufacture. The country abounds in lead, iron, coal, and a class of mineral not yet sufficiently analytically understood to properly state. Timber is found in abundance all over the country, consisting of oak, ash, walnut, maple, hackberry, sycamore, etc.

MINERALS.

Veins of excellent bituminous coal, ranging from three to eight feet in thickness, have been found along the line of the Boonville branch of the Missouri Pacific R. R., along the line of the M. K. & T. R. R., and in some five or six other locations in the county.

Hydraulic, enerinetal, and magnesia limestone is found in abundance all over the county. Fire clay has also been found near Boonville.

In regard to the coal land, or facilities in the county, it is estimated that fully 100,000,000 tons of excellent coal exists besides an equal amount of the ordinary coal formation suitable for uses aside from manufacturing purposes.

Lead in large quantities has been, and is being mined by the Central Missouri Mining Company, near the Lamine, and on what is known as the Scott lead mining district. All over the county this mineral has been found to a paying extent, and all it needs, as with the limestone formations, coal and iron, is capital to develop it and make it profitable to those investing, and successfully worked.

Iron ore of an excellent quality has been found in a number of places in the county. All that is wanted in Cooper county now to profitably develop its vast mineral resources is skill and capital. No better locality can be found in the State.

MANUFACTORIES.

With all the advantages of an abundance of timber and coal, with cheap river transportation, and railroad facilities already here and approaching, there is no spot in all the West where the capitalist and manufacturer can secure as safe an investment. There is already one of the best plow manufactories in the country at Boonville, as well as an excellent foundry, and one of the finest flouring mills on the Missouri slope. But the wants of the country are not one-

hundredth part supplied. More factories, machine shops, foundries, mills, etc., that go to make up the wealth of the country, and to sell, are in demand, and no better point than Boonville can be found to establish them.

PRICE OF LAND, ETC.

The average price of land in Cooper county is about \$13.00 per acre, and as rich as the sun ever shone upon. Some of the poorest of these lands, apparently, are being converted into blooming vineyards, and there are now in and around Boonville, an annual yield of twenty thousand gallons of the choicest wines made in the State. Five acres readily yielding a profit of from \$2,000 to \$3,000. Wheat, oats, corn, potatoes, flax, hemp, etc., yield probably more remuneratively in Cooper county than in almost any county in Central Missouri. Fruits of all kinds, adapted to the climate, yield in abundance.

RAILROADS AND SHIPPING FACILITIES.

Aside from the cheap river transportation at Boonville, via the Missouri river, they have the Boonville branch of the Missouri Pacific R. R., and the northeast extension of the Missouri, Kansas and Texas Railway, from Sedalia, crossing the Missouri river at Boonville, passing on via Fayette, the county seat of Moberly, thence on to the Mississippi river at Quincy, Illinois, tapping the Chicago, Burlington and Quincy R. R., and the Toledo, Wabash and Western Railway, also on through to Chicago, thus connecting over this Boonville bridge, the great trade of Texas and the Gulf of Mexico, with that of the great Lakes, and thence on eastward to the Atlantic Ocean.

With this, and the contemplated lines of railway centering at the Boonville bridge, which, under the management of its contractors, Messrs. Bomer & Co., of Chicago, promises to be the best on the Missouri river, affords additional inducements for capitalists and mechanics to locate there. Hundreds are visiting the city now weekly, looking after fields of operation, and few go away dissatisfied.

Recently the Boonville gas company have commenced, and are rapidly pushing to completion, the work of supplying the city with gas. The gentlemen interested in the franchise are Messrs. S. Watts, Ed. E. Squiers, W. H. Heath, and Chas. R. Ramsey. On the first of January, 1873, the city under this contract is to be supplied with a superior article of gas. Numerous other improvements are progressing there, which space will not permit us to mention, but it is regarded as one of the leading points in the State. Three weekly papers are published there. Three excellent private schools are in successful operation, and a more delightful place to live in, or better society, cannot be found in the State.

THE CITY OF CAPE GIRARDEAU.

Situation.—Situated on the west bank of the Mississippi river, and in that part of the State known as “Southeast Missouri,” from a moderate elevation overlooking the “Father of Waters,” is one of the oldest cities in the State, and noted as being the *metropolis* of the “Southeast,” enjoying a very extensive commercial trade, extending a distance of two hundred miles to the Southwest; the whole of northern Arkansas paying tribute to the Cape, on account of its superior shipping facilities; the landing for steamboats at this place being one of the best on the Lower Mississippi river; the shore of the river consisting of a solid wall of marble, which is easily brought to the proper grade for local purposes.

History.—Of the early history of Cape Girardeau, but little is known beyond the beginning of the nineteenth century, excepting traditional hearsay. It is a known fact, however, that Louis Lorimier, a Canadian by birth, is the original founder of Cape Girardeau, who for a long time was Post Commandant in the service of the Spanish, as well as French government; both of which countries owned this part of the State, prior to its transfer to the United States in (1804) *eighteen hundred and four*. As early as *seventeen hundred and ninety-four*, this place was inhabited by French missionaries, who, on friendly terms with the then existing tribe of Pawynaw Indians, tried to convert them to Christianity; but an afflux of French immigration gradually caused the red men to give up his hunting grounds and seek repose in parts of Arkansas, leaving the white men to reign supreme. Since that early period, quite a large number of Germans have settled here and many from the older eastern and southern States, who have added considerably to its growth and prosperity.

Population.—The material growth of Cape Girardeau, from its foundation by Louis Lorimier, in the year *eighteen hundred and eight*, has been considerable, considering the immense drawback it received during the late rebellion; when for nearly four years, the city was in a continued state of siege, by either Federal or Confederate troops; thus passing through the ordeal of blood and fire. But after the night, came the day, and the horrid wound inflicted by civil war almost depopulating and devastating this section of the country, began to be healed by the angel of peace, and Cape Girardeau has at present a population of about five thousand inhabitants; consisting of quite a large German element, who are noted for their frugal and industrious habits, and we may look with confidence for present prosperity and future wealth.

Education, Library, Newspapers.—In this matter, it may safely be said, that Cape Girardeau has made a grand investment, and has now a system of public instruction, that may challenge comparison with any city of its size. Besides a free, graded public school, in successful operation, which is capable of accommodating nearly six hundred scholars, it enjoys all the benefits to be obtained

from an extensively patronized college, both theological and classical, and a young ladies' seminary, under the patronage of the Catholic Church, as well as other denominational, high, select, and private schools, thus offering to every child of the city, a good English or German education, almost "without money and without price;" besides a Public Library Association, containing a number of volumes of the most select and instructive authors, of which all classes of society may enjoy the full benefit. Six live newspapers also add to the educational progress of the city.

Churches.—There are found two Catholic, one Lutheran, three Methodist, one Baptist and one Presbyterian church, which are all under the supervision of able clergymen, and in a flourishing condition.

Manufactures.—The industrial results of Cape Girardeau have received a grand impulse during the last few years, and the general result shows a large increase over any preceding years. Until lately little was done in the way of manufactures, but the prospected railroad interest lends a new impulse to its people and a new era has dawned upon the city. It has been discovered, that a thousand articles of primary and pressing need, can be made here just as well as elsewhere, as there are illimitable quantities of raw material which can be transformed into the thousand forms suited to the wants of the age, and so it can boast now of 3 flouring mills, 1 planing mill, 1 woolen mill, 2 paint mills, 1 windmill, 1 stove factory, 1 tobacco factory, 2 tanneries, 1 distillery, 4 breweries, 1 foundry, 1 furniture factory, 11 vineyards and a host of cooper shops.

Shipments.—The following statement shows the annual shipments from this port, mainly to St. Louis and New Orleans: 2,500 bales of cotton, 80,000 barrels of flour, 36,000 barrels of lime, 58,000 barrels empty, pork, lard, and flour, 12,000 barrels yellow ochre and Paris white, 35,000 raw hides, 25,000 coon and other skins, 10,000 pounds of wool, 5,000 pounds of feathers.

The woolen mills products are all consumed in this section, and their supplies are inadequate to the demand. This is the first year the vineyards have commenced shipping wine, there is about one hundred acres bearing vines, with three extensive wine cellars, now filled with the last years vintage. Large amounts of bacon, dried salt meats, and dried fruits, are brought to this market and shipped, principally to St. Louis and Chicago.

Clays.—Some very extensive beds of porcelain clay, or "kaolin," have been discovered, and large quantities are shipped regularly to Cincinnati and St. Louis, for the manufacture of queensware and pottery-ware; also large beds of the finest white sand, for the fabrication of plate glass, and a great variety of excellent limestones, which will furnish any quantity of the best materials of that class for building purposes.

Marbles.—There are also numerous and extensive beds of marbles of various

shades and qualities, some of them very valuable, which will become an important item in our resources. In fact, what with lithographic limestones, gypsum, cement, clays, fire-brick, paints of all description, granite, marble, sandstone, etc., the resources of Cape Girardeau are inexhaustible, and will place it far ahead of any other place in the Southeast.

CAPE GIRARDEAU AND STATE LINE RAILROAD.—BRIDGE.

This is an enterprise which promises to have a most important and beneficial influence on the future of Cape Girardeau, and the country through which it runs. From Cape Girardeau, it runs in a southwesterly direction, across level land, but at the foot of the hill country, through forests of great density, and immense growth of timber of the most useful variety, such as oak, black and white walnut, poplar, hickory, ash, cypress, gum, catalpa, etc., and for thirty miles of its length, through the iron deposits of Stoddard and Butler counties, which are of the purest and richest brown hematite, and in quantities entirely inexhaustible by human labor for ages to come, and also near rich deposits of lead, zinc, and copper, and affording the shortest and cheapest road to market for the agricultural products of southeast Missouri and northeast Arkansas.

The facilities that this road will furnish for obtaining and bringing these ores and timber to Cape Girardeau for manufacture—the iron ores, having to be transported but from thirty to sixty miles over a straight and level road (no grades exceeding ten and a half feet to the mile), and timber from beginning to end of road—when taken in connection with the facility with which coal of the best quality is obtained from the “Big Muddy,” coal fields and the favorable locality of Cape Girardeau with its bluffs of purest limes, will certainly bring about at no distant day the establishment of such manufactories of iron, wood, cotton, crockery, queensware, paints, etc., as will make the Cape the most important manufacturing point on the banks of the Mississippi river from St. Paul to New Orleans.

Other railroad projects, diverging from Cape Girardeau, that will soon be in successful operation, will contribute much to the growth and increase of the town. Among them may be enumerated the Memphis and St. Louis Levee railroad—the charter of which, makes Cape Girardeau a point on the line—the Grand Tower and Cape Girardeau railroad, the Jonesborough and Cape Girardeau railroad, the Terre Haute and Southwestern railroad, the Cape Girardeau and Cairo railroad, the Cape Girardeau and Iron Mountain (narrow gauge), etc., etc., furnishing a radiating system of roads that will confer great importance to their center, and will in a few years ensure the building of a bridge across the Mississippi river—the charter of the same having been already obtained; a solid rock bottom at a depth of from fifteen to twenty feet below low water, making the enterprise of comparatively easy accomplishment.

CLINTON, MO.

Clinton is situated on the Missouri, Kansas and Texas Railway, forty miles southwest of Sedalia; seventy-one miles northeast of Fort Scott, and two hundred and twenty-nine miles from St. Louis.

Henry county was formed out of the territory originally comprised within the limits of Rives county, in the year 1834; and in 1835, Daniel Boone, Joseph Montgomery and Francis Parizett, were appointed commissioners by the County Court, to select a site and locate the seat of government, which they did, and named it Clinton. Joseph Fields laid off the town in lots in the same year; from this time until 1860, the growth of Clinton was very slow, and the population was hardly more than six hundred; and in 1865, at the close of the war, its inhabitants scarcely numbered four hundred; but since that time, the improvements have been rapid and permanent. Few towns of the West can boast of a better class of buildings than Clinton; and every day matures new projects and plans, which grow into formidable business houses or ornamental dwellings. The growth continues to be rapid and the population now numbers four thousand, with one hundred and forty-one firms doing business; six churches already erected, and two contemplated; one public school, graded, an elegant building, which was erected in 1870, at a cost of \$38,000; three newspapers, the Henry County Democrat, Clinton Advocate and Southwest (Mo.) Enterprise, all large and ably edited newspapers and fully alive to the interests of the city and surrounding country.

Situated as is Clinton, convenient to water—Grand river flowing within two miles on the south; Big creek and Honey creek on the west, and Town creek very near the city; these streams are skirted with an abundance of timber, suitable for manufacturing purposes, while in the immediate vicinity of the city, and in fact underlying the whole county, is an abundance of a very superior quality of coal, which, with the railway facilities that Clinton will possess, when her contemplated railroads are all completed, will render her as well adapted to manufacturing purposes as any city in the vast West.

Clinton is surrounded for many miles in every direction by an excellent farming country—rolling prairies interspersed with timber and well watered—offering superior inducements to the emigrant.

The Missouri, Kansas and Texas Railway was completed to this city in 1870, which road has rendered material aid in promoting improvements of all kinds. There are also several roads projected: the Clinton and Memphis branch of the Tebo and Neosho Railroad, upon which the grading and masonry is completed forty miles south to Osceola; also the Clinton and Kansas City branch of the Tebo and Neosho Railroad, now in course of construction, which, when completed, will make Clinton a desirable railroad centre.

In the line of manufactories, there is represented the wool trade, by a large woolen mill, now engaged in the manufacture of woolen goods, with considerable local trade in wool. Also, three firms engaged extensively in manufacturing wagons and agricultural implements. An effort has been made to build up

a foundry, and with proper enterprise and energy, and a sufficient investment of capital would make this a profitable investment.

The county buildings consist of a court house, located in the centre of a beautiful square, a brick jail building, and a county infirmary, two miles from the city; a farm of one hundred and sixty acres with all the conveniences of a well-stocked farm, for the indigent, founded on the plan, and with the object in view of making it self-sustaining.

In addition to the public school (which has no equal of its kind in the southwest), there is "Dr. Cheney's Seminary," a most excellent school for young ladies, and a most invaluable addition to the city, and Prof. Dickinson's High School; also a Library Association. The citizens are fully alive to her educational interests.

Banks.—Clinton is well represented in banking houses; besides the old Banking House of Salmon & Stone, there is the First National Bank of Clinton, chartered in February, 1872.

Mills.—The Clinton Mills and Tebo Mills do an extensive jobbing trade in grain and breadstuffs with the Southwest, which is so large as to be in no sense local, thus affording a market for home products.

Clinton is the point of shipment for a large scope of country on either side of the M., K. & T. R. R., and has every facility for travel, having stage routes converging therefrom to Osceola and all points South and Southeast, and east to Warrensburg and Lexington.

With an excellent local trade, a population in 1870 of 17,401 in the county, against 9,866 in 1860, from which to draw her trade, her course must necessarily be progressive, and with increased railway facilities, Clinton will be placed in active competition with some of her larger sister cities for the jobbing trade of the Southwest.

COLUMBIA, BOONE COUNTY, MO.

The county seat of Boone County is Columbia, a town of about four thousand inhabitants. Columbia is located in a rich and healthy region of timber near the centre of the county. It is one of the most charming and delightful retreats in the State, its streets being laid out regularly, nicely paved, and shaded in summer with beautiful trees. Its outskirts are bordered with beautiful lawns, in which stand stately and elegant residences, beautified with all that nature and art can contribute. Its people are elegant, refined and highly educated.

The many educational advantages afforded by Columbia have given it a notoriety as "The Athens of the West." It is the great educational centre of the State. Here is located the State University, Dr. Daniel Read, President. This institution is second to none in the West, for the opportunities it affords the youth for intellectual and moral training. A corps of learned professors contribute their wisdom and experience to its advancement. In connection with the University is the State Agricultural College, and also a Normal School for the education of young men and women for teaching. A Law Department

has also been connected with the University, and it opened on October 16th, 1872, with every prospect of success.

Here are also located Christian and Baptist Female Colleges, presided over respectively by Elder J. K. Rogers, and Rev. E. S. Dulin. These institutions have justly attained a wide spread fame. There are none better to be found anywhere for the education of young ladies, and each year their spacious halls are thronged with pupils from every portion of the State; and many come from other States to acquire here the accomplishments in the varied branches of learning that these institutions impart.

There is but little doubt that at no very distant day both the Presbyterian and Methodist denominations will also establish colleges here.

Cummings' Academy, C. E. Cummings, a colored man, principal, is the best colored school in the State, without exception. It is well disciplined and largely attended. The good results of this establishment are daily becoming more apparent on every side.

Besides the above, there are numerous other schools in the town, all efficiently conducted and in a prosperous condition. On every side there is ample provision for all who wish to drink at the fount of knowledge. In whatever branch of learning they may ask to be instructed, the means to satisfy them are ready at hand.

In Columbia there are five churches—the Baptist, Christian, Presbyterian, Methodist and Episcopal, and two colored, the Baptist and Methodist. All have large congregations and flourishing Sunday schools.

Columbia is a point of considerable business interest. The rich and thickly settled region around, and the large number of students that annually attend her colleges create a great demand for the necessities of life. The market for the produce of the farmer is therefore always active and prices good. Trade is nearly always brisk, and dry goods, drug and grocery stores, and boot and shoe stores transact every year a large business. The same can be said of every other branch of trade in Columbia. Banks, tailoring establishments, livery stables, book, hardware and grocery stores, jewelry stores, tin shops, saddle and harness shops, mills, etc., are in a prosperous condition. Mechanics find plenty to do at fair prices. The professions are well represented.

There are printed in Columbia two weekly eight column newspapers—the *Statesman*, by Wm. F. Switzler, and the *Herald*, by Anderson & Stephens. The former is, except the St. Louis *Republican*, the oldest paper in the State of Missouri, having been established by its present proprietor in 1843. It possesses a wide circulation and commands a large and paying patronage, and was never in a more prosperous condition than at the present time.

CANTON, LEWIS COUNTY, MO.

Population, three thousand. Location: Canton is located on the west bank of the Mississippi river, one hundred and ninety miles north of St. Louis, twenty miles above Quincy, Illinois, and twenty-five miles below Keokuk, Iowa, and in latitude 40 deg. and 20 min. north, and 91 deg. and 30 min. west.

Here the Mississippi makes its boldest sweep westward, at the western extremity of which is located Canton, on a beautiful inclined plane, in the form of a crescent, about three miles in length and one to one and a half in width. The plane rises from the river at an elevation of seventy-five feet to the mile. It is arrested by a circle of hills of the most picturesque and beautiful outline. The location of Canton is regarded as one of the most healthy in the West. The climate is excellent, the air pure, and the water abundant and of the best quality. The table-lands which recede in either direction from the summit of the hills on the west of the town are regarded as the finest agricultural, grazing and fruit lands to be found in Northeast Missouri.

The rival lines of steamboats on the Mississippi river, offer to our farmers and stock dealers fast and cheap transportation to one of the best markets in the West—St. Louis, the already commercial centre of the West; and already the amount of wheat, corn and oats produced in the surrounding country and shipped from Canton to St. Louis, exceeds the amount raised and shipped by any other locality or place between St. Louis and St. Paul.

In addition to the river communication, the Mississippi Valley and Western Railroad is now completed from Keokuk, Iowa, to a point opposite to Quincy, Illinois, and will soon be finished to St. Louis, and the west branch of said railroad, which will run from Canton, west to Brownsville, Nebraska, is already graded for the distance of forty miles west from Canton, and will soon be ironed and in running order, and when completed Canton will indeed rival Hannibal in the lumber business, and then may soon expect an increase of several thousand inhabitants.

The situation and facility of communication, makes Canton a peculiarly desirable place for the location of manufactories. There are already one foundry, three planing mills, two sash, door and blind factories, one hub and spoke factory, three flouring mills and one large saw-mill. The eastern portion of the town being along the bank of the river and just above high-water mark, offers very superior locations for machine shop, foundry, and rolling-mill purposes.

The educational facilities of the town are good. Christian University, situated on the summit of the hills west of the town, is a fine building, has an able corps of professors and teachers connected with it, and all the various branches of learning are here taught, which are also taught by the various universities and colleges of the West. In addition to the College, there are also two \$10,000 public schools in the town, with a corps of nine public school teachers.

The trade of Canton is principally retail, but there is one wholesale grocery store which has an excellent custom from Northeast Missouri.

FREDERICKTOWN, MADISON COUNTY.

Fredericktown is one of the oldest and prettiest towns in the State of Missouri. It is situated one hundred miles south of St. Louis, and is directly on the St. Louis and Iron Mountain Railroad, leading from St. Louis to Belmont,

Kentucky, and connecting with the principal roads striking Memphis, Louisville, and New Orleans, and the older cities of the South.

This town has a population of one thousand eight hundred, and was settled by the French, and by Kentuckians and Virginians in 1819. Portions of Madison County were settled long prior to this by the French and Spaniards. The unrivalled mining resources and mineral wealth of this county attracted, at a very early day, these people there. Many of their descendants still live in the county. Fredericktown is situated on a lovely hill, which overlooks a beautiful and rich country. Its climate, as well as that of the whole region south of St. Louis, known as Southeast Missouri, is exceedingly salubrious. The summers are moderate and the winters mild and short. Stock is kept up but six weeks of the year, and snow and ice do not long remain. Peaches, grapes, and all kinds of fruits flourish as successfully as in Delaware and New Jersey. The town is the centre of a number of manufacturing enterprises. Numerous fine flouring and saw-mills are in successful operation, while the rapid development of the great mineral resources of the county require many crushing mills and furnaces. In no county in Missouri is there such an abundance of fine yellow pine, cherry, ash, oak, hickory, and walnut timber. A large business in getting out and shipping this timber to the markets of St. Louis and the cities of the South is carried on.

The soil runs from hills to valleys, and is well watered by numerous streams of constantly flowing water, on which water-powers can be kept in operation more than ten months of the year. The hills, besides being studded with majestic timber, are covered with fine, soft grass. Blue-grass here flourishes as well as it does in Kentucky. There are thousands of acres of land in this county, susceptible of the highest state of cultivation, on which the plow has never yet turned a furrow. It is cheap—ranging from \$1.25 to \$7.00 per acre for unimproved agricultural lands, and from \$5 to \$35 for improved and open farms. The country affords splendid facilities for stock raising. The agricultural products are wheat, oats, barley, rye, corn, potatoes, and tobacco, as well as peaches, pears, strawberries, and other fruits of like character.

The educational advantages of Fredericktown and Madison county are excellent. During the year 1871, a fine, new common school building was finished in the town, at a cost of \$10,000. The people heartily sustain the system of popular education, and school houses are scattered in every part of the county. Churches are numerous. The population is about evenly divided between the Methodist, Episcopalian, Presbyterian, Baptist and Catholic denominations. Many eastern people have settled in this county since the close of the war, and many Germans are to be found here. Since 1868, Fredericktown alone has trebled its population, and is still rapidly improving. A good society prevails, and all strangers are heartily welcomed and kindly treated. The asperities growing out of the war have long been settled.

The manufacturing enterprises in this county afford a better home market than is to be found in St. Louis. More than double the population of the county are engaged in the business of mining and manufacturing than are engaged in farming, hence no part of Missouri affords so fine opportunities for

successful and profitable farming, than is to be found in this county. As a general rule, the timber cut and sold, will pay the price of the land, and the cost of clearing it. No one class of men are so badly needed in this county as good, enterprising farmers. Sheep nowhere thrive better than here.

Although this town and county were early settled, yet remaining as it did comparatively isolated, until the completion of the railroad, in 1868, which runs through it, it is in many respects a new county. Its resources, though rich, varied and illimitable, have just begun to be developed. A large woolen mill, a tan yard, a cheese factory, a shop for the exclusive manufacture of furniture by steam, and many other manufactories are needed.

The St. Louis and Iron Mountain Railroad have recently erected large round houses and machine shops at Fredericktown, and, as it is a central station of the road, the company contemplate enlarging them at an early day. The town is quite a business centre, and a large mercantile trade is carried on in it, with people living in the lower counties of Missouri, and upper Arkansas.

In no county in Missouri is there to be found so varied an abundance of mineral wealth as in Madison County. Its lead, copper, and nickel mines have been profitably worked for fifty years; and since the completion of the railroad, its mines of hematite iron ore have been opened and largely developed. Great quantities of this iron exists here, and Mathews' Mountain—a mountain of almost solid iron—is but six miles north of Fredericktown. The celebrated LaMotte estate is in this county. It contains 24,010 acres, and the proprietors were recently offered \$2,500,000 for it. On this estate over two thousand five hundred people are employed and supported, principally in the business of mining. It is questionable if another territory of its dimensions in the country presents the wonderful spectacle this magnificent estate and county does, for here is to be found in great and paying quantities, iron, tin, zinc, lead, copper, magnesia, arsenic, cobalt, nickel, bismuth, antimony, and silver. In geological substances kindred to metals, kaolin, fire-clay, grindstone, French burr-stone, building sand, moulding sand, brick-clay, Paris white, sulphur, silex, feldspar, lime-stone, granite, and marble also abound.

All around Fredericktown is a vein of metal, and between it and beyond are the finest lands one would wish to feast his eyes upon, while within forty miles are the coal beds of Illinois. With the resources possessed by this county it can not be doubted that it will necessarily, in the near future, be one of the wealthiest and most populous of the State, and that Fredericktown will grow to be a flourishing city of 30,000 population.

LOUISIANA, MO.

The original proprietors of the town of Louisiana, were Joel Shaw and Samuel K. Caldwell. The town was laid out in 1817, then in St. Charles County, territory of Missouri. In 1818, county seat of Pike County established at Louisiana. First circuit court held here by Hon. David Todd. In 1820, Missouri admitted into the Union, and Hon. Rufus Pettibone, first circuit judge, held several terms, and was then appointed one of the supreme judges of the

State. Levi Pettibone, still living, was the first circuit clerk under the State Government. The next circuit judge was Hon. Beverly Tucker, who held one term of the court at Louisiana, when, in 1824, the county seat was removed to Bowling Green, the present county seat.

In 1845 the town of Louisiana was incorporated by act of the General Assembly, approved January 31, 1845, John C. Edwards, Governor; Claiborne F. Jackson, Speaker of the House of Representatives; James Young, President of the Senate. First Board of Trustees, Edwin Draper, Horace H. Jenks, William C. Hardin, Edward G. McQuie and William Alexander. Second Board, 1846, Edwin Draper, H. H. Jenks, C. M. Duke, William Alexander and William Lee. Third Board, 1847, Edwin Draper, William Alexander, James H. Johnston, William English and Silas W. Farber. January 3, 1848, ordinance passed authorizing the erection of a wharf. March 10, 1849, the act to incorporate the city of Louisiana, Missouri, passed, and William K. Kennedy was elected first Mayor.

Railroads.—In 1837 the first railroad survey in the State of Missouri was made from Louisiana to Columbia, Missouri. The principal engineer furnished by the War Department of the United States. No work was ever done on said road, but the line was substantially the same as that from Louisiana to Mexico, now in successful operation by the Chicago, Alton & St. Louis Railroad Company. This company now runs two daily trains of passenger coaches over this road from Chicago to Kansas City, and two or more daily freight trains.

The Quincy & Burlington Railroad runs two daily trains each, passenger and freight, from Quincy to St. Louis, touching at Louisiana, and Road House, Illinois, making the time from Louisiana to St. Louis about five hours.

The St. Louis & Keokuk Railroad (the charter line), through Louisiana, is graded from Louisiana, through Clarksville and Lincoln County, and most of the line through St. Charles, and will probably be ready for the cars by the middle of January, 1873, and then through trains will bring Louisiana within three hours run of St. Louis. The northern or Keokuk end of the road will be completed during the ensuing spring and summer.

TRADE, ETC.

The present population of the city is five thousand. There are two banks of discount and deposit, but none of issue. The National Savings Bank, formerly a branch of the Bank of the State of Missouri, and the Bank of Pike County, both doing a prosperous and safe business, furnishing exchange to all the principal cities of the Union and of Europe.

The principal manufactures are four tobacco factories, three steam flouring mills (all having good reputations in the market), five extensive lumber yards (carrying over \$1,000,000 of capital), three planing mills (all doing a large and prosperous business), one foundry and machine shop (including the manufacture of car wheels), five blacksmith and plow shops, one carriage factory, five cooper shops, three furniture stores and manufactories, three saddle and harness factories, three merchant tailors, four clothing stores (exclusively), ten dry

goods stores (including clothing), four millinery and fancy stores, twenty-two grocery and provision stores, three bakeries, three stove and hardware and iron stores, eight hotels and boarding houses, three livery stables, two dairy establishments, one pork packing and smoking house with steam engine and lard tanks, two large brick-yards, with large demands for brick (clay equal to any in the State). Many smaller trades and shops not enumerated. Also four butcher shops well supplied with the best of meats; permanent gas works; and the principal streets elegantly lighted, and constantly extending; two telegraph offices, Western Union and Atlantic and Pacific.

EDUCATION AND SCHOOLS.

One fine brick edifice, embracing all the branches of education taught in the best high and common schools, and two colored schools, all free, supported by special tax; one high school or college under Baptist auspices, not free.

GENERAL ADVANTAGES.

1. Louisiana is admitted to be the most beautiful location, surrounded by the most elegant scenery above St. Louis, embracing every variety of location for business, manufactures, and residences, of hill and valley, to suit the views or tastes of the most fastidious. Property is, with but few exceptions, comparatively low. The navigation of the Mississippi, now supplied by two full daily lines of steamers, one tri-weekly line, and various irregular boats, will be the everlasting support of a trade for rich and poor.

2. With five lines of railroad, diverging from the city, east, west, north, and south, and probably the sixth, all co-operating, or competing with the river navigation, no place offers greater inducements for locating manufacturing establishments than Louisiana. The Louisiana and Missouri River railroad, and Jefferson City branch, will supply all the coal needed, for generations to come.

3. The hills, slopes, and valleys surrounding Louisiana, are extensively cultivated in grapes and all the fruits suited to a temperate climate, and are not exceeded in quality or capacity by any place in America outside of California, which is perhaps better for grapes. These are raised here with but little skill, but yield immense profits to the skillful and industrious vineyardist in quantity and quality.

4. Louisiana, from its peculiar location and access to all parts of the county, is now, and probably continue to be the chief commercial town of the county of Pike, long known as the "Egypt" of North Missouri, for supplying the country with corn and bread, when other localities fail. If she has not had a *Joseph* to manage her immense natural resources, as in days of old, she has come as near it as she could, in furnishing one United States Senator, two Congressmen, one State Supreme Judge, three Circuit and Common Pleas Judges and plenty of others who would willingly sacrifice themselves for the public good in the same capacities. Very likely some of the immense throngs of

children attending her schools, may some day furnish a President of the United States at least as soon as St. Louis has the White House ready for his reception.

MEXICO, AUDRAIN CO., AND ITS AGRICULTURAL AND COMMERCIAL ADVANTAGES.

The city of Mexico is situated at the intersection of the North Missouri Railway with the Louisiana and Missouri River and South Branch Railways, one hundred and eight miles northwest from St. Louis, fifty miles north of Jefferson City, the State capital; fifty miles southwest of Louisiana, on the Mississippi River; one hundred and sixty miles east from Kansas City, and is the county seat of Audrain County, Missouri.

The city has a population of about 4,000 people; ten churches, many of them large, beautiful and costly brick structures; two newspaper and job printing establishments; two banks in operation, and a new National Bank in process of organization, with a capital fixed at one hundred and fifty thousand dollars; a well established system of graded schools; three hotels, first-class; a woolen factory, flouring mills, saw mills, wagon and carriage manufactories, etc., etc.

In the heart of the city stands an elegant and commodious new court house, in the midst of a public park, which is handsomely decorated with evergreen and ornamental shade trees, and surrounded by an iron fence—all erected at a cost of about \$60,000, and now entirely paid for.

Audrain County lies in about $39\frac{1}{2}$ degrees north latitude, embracing about 700 square miles, with a population of 15,000. Its climate is most healthful, with short and mild winters, while the springs, summers, and autumns are most delightful.

The lands of the county comprise rich and rolling prairie and timber lands, beautifully diversified and well watered by running streams, and all its lands are of easy cultivation, and largely productive in all cereal products. As a grass growing country it stands unrivaled, even by the famous blue grass region of Kentucky, making it one of the most profitable stock growing regions in the world.

During the past year were grazed within an area of twenty-five miles of Mexico, 34,000 marketable cattle, while the grazing capacity of the county is equal to 200,000 head.

Our county is also very inviting to the fruit grower. Apples, peaches, pears, plums, and the smaller fruits being grown with unusual certainty, quantity, and of peculiar delicacy of flavor.

While the population of the county is rapidly increasing by immigration, there yet remain large quantities of unimproved lands near thriving new settlements, and which can be purchased at prices ranging from five to ten dollars per acre, and improved lands at an average of twenty dollars per acre. The unimproved lands of the county now in market, offer larger inducements for the investment of capital and the selection of homes, than any portion of the West.

No inland city has more facilities for manufacturing than has the city of Mexico. Abundance of fuel, timber and water, can be had in and around the city. Coal of the best quality underlies large portions of the county, and even the city itself; while lands in the city for the location of manufactories can be obtained at merely nominal rates. While all manufactured articles can be made in the city cheaper—together with an unlimited home demand—we have the advantage of all the markets east, west, north, south, and of cheaper freight by the net-work of railroads that run through our city.

The trade of the city, in all its branches, is enormous, being larger than that of any other point on the roads between St. Louis and Kansas City. A large portion of the surrounding counties is tributary to the city, and its stock trade is larger than any inland city in the State. The freight handled at the depot of the N. M. R. R. Co. alone, during the past year, amounted to 16,215 tons, on which was collected \$70,000 freight bills; while the whole value of live-stock marketed from this county during the same time will reach \$1,250,000.

The population of the city and county are industrious, liberal, intelligent and progressive; great interest being taken in our public schools, the system of which is equal to that of any of the older States, with an ample school fund, and now in full operation throughout the county, in tasty and comfortable school houses, from six to ten months in each year. All looking westward for investment or a home, should visit Mexico before making a final location.

SPRINGFIELD, MO.

The city of Springfield is situated on Wilson Creek, two hundred and forty-one miles southwest of St. Louis, on a high table-land near the summit of the Ozark Mountains, being some 1,200 feet higher than St. Louis, and the county seat of Greene County. It had acquired a considerable reputation as an Indian trading post and frontier village as early as 1820, being known in the Middle and Western States as a superior hunting ground, and healthful locality. Along the course of Wilson Creek were beautiful groves of walnut, sycamore, black jack, and oak trees, of luxuriant growth of perhaps a half a century, from among which the underbrush had been cut away, making one of the handsomest hunting grounds in all the Southwest. There stretched out on the north and east rich timbered lands, and on the south and west beautiful prairies, which in early days were cultivated by the *aborigines* as a *field* or native Indian farm. Around this pioneer village and handsome field were many living springs, from which it took the name of Springfield.

The Indians gave up this hunting ground very reluctantly, holding it tenaciously against the intruding pale faces, until 1830, when they found themselves in the minority, and Springfield was then incorporated as a town, with a population of five hundred. In 1835, Hon. W. F. Switzler, now editor of the *Columbia Statesman*, passed through this town on his way from Boonville to Alexandria, Louisiana, and recorded in his diary that Springfield was a poor place; some eight or ten log cabins altogether, constituted the place. There were four stores, two groceries, two blacksmith shops, and a tan yard. Its population

remained about the same until 1857, when it began to increase, and in 1860 it had twelve hundred inhabitants. It had a varied fortune during the rebellion, being occupied by both armies, at different times, and each time to the detriment of the city. It came out of the rebellion in 1865, badly demoralized in every respect, with a population of five hundred. At this time it began to increase rapidly, some of its former citizens returning, while its chief increase was from Tennessee, Illinois, Indiana, Ohio, Michigan, and Kentucky. According to the census of 1870 it had a population of five thousand five hundred and sixty-three. For many years Springfield has been the metropolis of all of southwest Missouri, northern Arkansas, southern Kansas, and northern Texas, supplying those sections with nearly all their goods and supplies. The Atlantic and Pacific Railroad was formally opened to this city, May 3rd, 1870, which somewhat changed the jobbing trade of Springfield, cutting off some of its scope of country and taking some of its trade to St. Louis. It still, however, supports three large and exclusive wholesale dry goods and grocery houses, all doing a good business. The city has been obliged to turn itself to its local trade and manufacturing for its chief support. It has now one hundred and fifty business firms in all departments of trade, which sold goods in the year 1871 to the amount of \$2,618,773; this amount has been largely increased the present year.

Since the advent of the railroad constant shipments have been made of the large quantities of wheat, corn, oats, rye, buckwheat, tobacco, and herds of cattle, mules, sheep, and hogs, with apples, peaches, pears, grapes, etc., with which this country is very prolific. In 1871, 185,433 bushels of wheat were shipped, two hundred and sixty-three car loads of stock, and other produce in proportion.

Springfield has two National banks, each with a capital of \$100,000, and each doing a safe and prosperous business. It has three first-class hotels, the Metropolitan, St. James, Ozark, and four well established newspapers, the *Patriot*, *Leader*, *Times*, and *Advertiser*. Springfield has generously encouraged manufacturing interests, of which the oldest is the Springfield Iron Works, a prosperous stock company, doing a business amounting to near \$100,000 a year, making engines, boilers, mill machinery, and every description of farm implements. These works have substantial buildings covering three-fourths of an acre of ground, worth \$65,000, employing sixty operatives, and have \$200,000 in working capital. The Springfield Manufacturing Company was organized in March, 1872, with a capital stock of \$40,000, a working capital of \$20,000, employing fifty workmen and turning out fifteen wagons per week, and the demand not half supplied. M. K. Smith's woolen mill was established in 1872, worth \$20,000, employing fifteen operatives, and has \$2,200 of working capital. The Springfield Cotton Manufacturing Company began with a capital stock of \$100,000, has erected a building worth \$30,000 and put in machinery worth \$60,000, leaving \$10,000 working capital.

Springfield has three flouring mills, two planing mills, seven lumber yards, and the machine shops of the Atlantic and Pacific railroad, with capacity for seventy-five men. It has twenty practicing physicians and forty practicing lawyers. The bar of Springfield is worthy of special mention, it having no

superior for integrity and ability anywhere in the State. The courts, too, both the circuit court and the probate and common pleas court, are noted for their integrity and ability.

Eleven church societies are in a prosperous condition, and one of the best regulated free graded schools to be found in the West, in session ten months in the year, in a fine three-story brick edifice, and a two-story brick building used for a colored school, together with a fine school at North Springfield, in a two-story brick building, all costing \$60,000. The people are intelligent, orderly, and industrious. The city has doubled its population and wealth since 1869. Its present population is over seven thousand, and its present taxable wealth over \$3,000,000, and rapidly increasing. Over two hundred houses have been built the present year, with every prospect that many more than that will be built the coming year. A second railroad is now being built to Kansas City, and a company has been organized to construct another south toward Galveston.

Considering the healthfulness of the location, its educational and commercial advantages, supported as it is by manufacturing interests and a rich, productive, farming country, Springfield becomes one of the most desirable locations in the West.

STE. GENEVIEVE · ITS EARLY HISTORY.

The ancient town of Ste. Genevieve is beautifully situated on the west bank of the magnificent Mississippi, about sixty miles below St. Louis. Reposing in beauty amidst the surrounding hills, it presents a most charming view from the river, whilst the interior is delightfully diversified by beautiful streams, which meander through the town, on their way to mingle with the Father of Waters.

The commerce of Ste. Genevieve, must also become important. For, besides being the place whence the lead from the rich mines of southeastern Missouri is shipped, it is now, and must remain, the depot and shipping point of the incalculable quantity of iron produced at the Pilot Knob and Iron Mountain, distant about forty-two miles. When the contemplated railway from Ste. Genevieve to those vast deposits of iron is completed, and a line of steamboats established between this point and St. Louis, Ste. Genevieve will, in a few years, become a commercial city of no inconsiderable importance.

The immediate vicinity of Ste. Genevieve abounds in natural wealth—marble, limestone, rose-colored granite, sand, sandstone, and building materials exist in vast quantities. The marble and sandstone is worked with much ease and cheapness, it is well adapted to the manufacture of tombstones and monuments, and is a most beautiful material for building.

The Ste. Genevieve lime is estimated to be a very superior quality, and a large amount is made here annually, and shipped to Memphis and New Orleans markets. The sand, which is of a beautiful, dazzling white, resembling loaf sugar, is considered the best in the United States for the manufacture of glass

and large quantities are shipped to Boston and Pittsburgh, for the manufactories of those cities.

Possessing so many elements of wealth, and affording so many sources of profitable employment, we may well indulge the thought that the day is not far distant when Ste. Genevieve will have an active, numerous and wealthy population, and become one of the most important manufacturing towns in the State of Missouri.

The present town of Ste. Genevieve was settled by a few French families about the year 1785, previous to "*L'année des Grandes Eaux*," (the year of the great flood.) In consequence of the overflow of the Mississippi in 1785, a portion of the inhabitants of Kaskaskia, in Illinois, and of "*Le Vieux Village*" (the old town of Ste. Genevieve), emigrated to this place, and it was not until it received this addition to its population that it assumed the character of a village. The old village of Ste. Genevieve was settled about the year 1735, and was located in what is now called "*Le Grand Champ*" (the Big Field), about three miles distant from the present town. Of the old village nothing remains. Originally "*Le Grand Champ*," which lies immediately below the town of Ste. Genevieve, contained four thousand acres of land, all under one fence, and cultivated in common by the inhabitants, but it is now diminished in size, caused by the caving in of the banks of the Mississippi. This "*Le Grand Champ*," is one of the most beautiful and fertile bottoms on the face of the globe; and is every year decorated by its rich products, that lie on its surface in magnificent profusion, furnishing most of the necessaries of life to all the inhabitants of Ste. Genevieve, a great number of whom are cultivators of "*Le Grand Champ*."

The original settlers of the town of Ste. Genevieve, are Joseph Loiseau, Jean-Bapt. Maurice, François Coleman, Jacques Boyer, Julien Choquet, and others, who had settled here previous to "*L'année des Grandes Eaux*" (the year of the great waters), and by Jean-Bapt. St. Gemme Beauvais, Vital Beauvais, Jean-Bapt. Valle, Sen., Henri Maurice, Parfait Dufour, Joseph Bequette, Jean-Bapt. Thomure, Joseph Govreau, Sen., and Francis Valle, commandant at the post of Ste. Genevieve, who came here immediately after the great flood of the same year, 1785. These persons were all remarkable for their strong constitutions, simplicity of manners, and honesty of purpose; and were endowed naturally with good minds, but without the advantage of a liberal education. They were free of ostentation and a display of pleasure, except such as were of an innocent character. Their clothing was remarkably plain, they wore heavy striped gingham pants, without the support of suspenders, but fastened by a belt and clasped around the waist, without vest, a blue or colored shirt, a white Mackinaw blanket coat, with a capuchon, moccasin shoes, and a blue cotton handkerchief around the head. The apparel of the early female inhabitants was also very simple, they wore cotton and calico dresses, and the waist fastened by calico strings, their beautiful shoulders ornamented with a mantle, their necks decked with a rich madras handkerchief, and their feet clad with moccasin shoes; their heads were encircled with a blue or colored cotton handkerchief.

The patriarchs of Ste. Genevieve were by occupation cultivators of the soil,

and voyageurs with barges and keel-boats to New Orleans. They were also traders in European goods, which they exchanged for furs, peltries and lead.

These adventurers in their early settlement of St. Genevieve, had to encounter many privations, and they passed through the ordeals of many romantic adventures of a savage life; and well they deserve the appellation of pioneers, who felled the forest, and made way for the advance of civilization in the great West of our Union. But they have sunk into their graves, and are now no more. But a few days ago, one of the patriarchs above mentioned, could be seen in the town of Ste. Genevieve, leaning on the staff of old age, with ease and grace, his head seemed bleached with nearly one hundred winters. This venerable old man was John-Bapt. Valle, Sen. His wife, also, lived to an old age, loved and venerated by all. Some years previous to her death, in accordance with an old French custom, she was re-married to her husband, John-Bapt. Valle, Sen., after half a century of the enjoyments of a married life. It was an imposing and solemn ceremony to see this venerable couple renewing the first vows of their early affection and loves at the hymeneal altar.

At an early period, know as "*L'année du coup*" (the year of the blow), the inhabitants of "Le Vieux Village de Ste. Genevieve," were called upon to defend St. Louis, which was then threatened to be attacked by the English and different tribes of Indians. Sylvis Frances Cartabona, a governmental officer, was ordered to Ste. Genevieve by Don Ferdinand Leyba, then Lieut. Governor of the post of St. Louis, to enlist a company of militia men for the protection of St. Louis. A company of sixty men was raised under the immediate command of Capt. Charles Valle of the post of Ste. Genevieve, which went up in a keel-boat, and were stationed at St. Louis; but whilst there the Lieut. Governor, Don Ferdinand Leyba, did not furnish them with ammunition, which they were mostly destitute of, thus causing much disappointment and mortification to the gallant men, who had left their homes to go and defend their friends in St. Louis. Little did the Ste. Genevieve company think, at that time, that the Lieut. Governor was acting in bad faith towards them and the town of St. Louis, but his subsequent conduct fully proved his treachery, and placed the Ste. Genevieve company in a false position, as they had partly to obey orders under the despotism of Spain, which was repugnant to their feelings.

Previous to the attack upon St. Louis, an old man named Quenelle, a resident, had crossed the Mississippi river, and went to the mouth of the Kahokia creek, in Illinois, and from what he had seen of the disposition of some Indians, and a notorious outlaw named Duchorme, on his return he informed the Lieut. Governor Leyba, that an attack would soon be made, for which he was treated with contempt, and sent to prison.

About the time of the attack upon St. Louis, the commandant of the Ste. Genevieve company, seeing that he was deprived of powder by the Lieut. Governor, Don Ferdinand Leyba, sent five men to take three kegs of powder, which an old lady, resident of St. Louis, had at that time, but did not wish to deliver up, insisting on them not to do her any harm, should she refuse to give up the powder. They, however, conveyed the powder to headquarters, and the

commandant, Charles Valle, seeing the treachery of the Lieut. Governor, determined not to obey orders.

Whilst the commandant of Ste. Genevieve was absent from his headquarters, Leyba ordered the company to march up into the garret and spike their guns, and some of the men had obeyed the order, but as it was about being executed by the whole company, the brave commandant of the Ste. Genevieve company came up, and at once perceived the treacherous order, and said, "*Que son poste est près de son canon, et non dans un grenier, et que si l'ennemi viendrait qu'il serait prêt à se défendre;*" and standing to his post, ordered his men to stand by him, and did all he could under the circumstances, to aid the citizens of St. Louis, when the post was attacked by the enemy. It is well known that Lieut. Governor Leyba acted in bad faith, and was despised by all the inhabitants of St. Louis and Ste. Genevieve, on account of his treacherous conduct, and feeling conscious of his own foul act, died shortly after. It was thought that he terminated his own life by poison. After the attack on St. Louis had failed, the company returned to their home, "Le Vieux Village de Ste. Genevieve."

At the early settlement of the present town, Ste. Genevieve, the Peorias, a tribe of Indians, from the State of Illinois, were located immediately south of the town of Ste. Genevieve, along the bluffs, and having a great many enemies amongst the Osages and Shawnees, did not venture far in the forest, but felt safe in this locality under the protection of the commandant of this post.

Ste. Genevieve is now made the deposit for all the iron ore from Pilot Knob and Iron Mountain, to be shipped to divers cities, but principally to Pittsburgh. Also is here deposited, all the lead, cobalt and copper, made in the neighboring counties in southeast Missouri. Two newspapers are now established in Ste. Genevieve, the *Pioneer*, and the *Democrat*. The telegraphic line that connects Nashville and St. Louis passes through the town of Ste. Genevieve. Nothing seems more surprising and magic like, than the flashes of intelligence flying with the rapidity of lightning through the old town of Ste. Genevieve.

ST. JOSEPH.

HISTORY.

The founder of St. Joseph, the pioneer who, as early as 1803, pitched on the "Black Snake Hills" his tent, and erected his huts and made profitable exchanges of glass beads and "fire water" for the valuable furs and peltries of the Indians, was Mr. Joseph Robidoux, who was born in St. Louis in August, 1774. Mr Robidoux selected this spot, impressed by its richness and extent of country, and by the fact that here the Indians were in the habit of crossing the river, going on to the Kansas, Big Blue, and other streams of the prairie beyond, for the summer, and returning to winter, where, in the rich bottoms and heavy timber of the Missouri, they could always keep warm and find plenty of game. The Indians knew the place by the euphonious

title of the "Black Snake Hills," and so it was called by the early pioneer, even after it had grown into a populous city. In 1840, the United States, by treaty with the Sacks, Foxes and Iowas, acquired possession of the "Platte Purchase," now comprising the counties of Platte, Buchanan, De Kalb, Nodaway, Holt and Atchison, which was thus thrown open to settlement, the Indians moving into the Indian Territory. Mr. Robidoux preempted the 160 acres comprising the "original" town in 1743, naming it after his patron saint, "Joseph," although it was not incorporated until 1845. The first sale of town lots took place in September, 1843, \$100 being the uniform price of the lots, except corner lots, which were held at \$150. In the first year of its infancy, it was honored by a visit from the great naturalist, Audubon, on his river trip to the Yellowstone, who thus records his favorable impression of the place, May 5th, 1843: "After grounding on sand-bars and contending against low winds and currents, we reached the "Black Snake Hills Settlement," which is a delightful site for a populous city which will be here some fifty years hence. The hills are two hundred feet above the level of the river, and slope down gently on the opposite side to the beautiful prairies that extend over thousands of acres of the richest land imaginable." At this date there was but three block houses in the whole settlement, but rapidly the town began to gather hardy adventurers, willing to endure the discomforts of frontier life for the great encouragements the future held out to them.

In 1851, she applied to, and obtained from the Legislature of the State, an act of incorporation as a city.

In 1849, the city became the great point for the fitting out and departure of emigrant trains bound for the then new eldorado—California. It was a bustling town, full of hopeful men, arriving and departing, allured by the expectancy of untold riches in the new country beyond the Sierras. The patronage which the town thus gained was of immense advantage to its merchants, who gathered rich harvests of profit, and devoted their energies and means to opening communication by rail, eastward.

POPULATION AND PROPERTY VALUATION.

From its inception to the present time, the growth of the city has been very rapid. In 1843, it contained but three log houses, erected by its founder, as trading houses. At the close of the year 1845, it contained six hundred people, and its property was assessed at \$40,000. In 1846, the county seat having been removed from Sparta, it gained a large accession of population. In 1850, it numbered 3,460 people, and taxable property to the amount of \$583,016, and in 1860, 8,932 people, and taxable property \$5,134,249. During the years of the war, it suffered greatly and lost a large portion of its people, who withdrew from the troubled scenes of which the city was for a time the place of struggle, so that, at the close of the conflict in 1865, the city contained but 7,500 people. It but needed a cessation of hostilities to regain all it had lost, and to keep up its former steady growth. In 1870, the census showed 19,565 people, and at this date, 1878, it is calculated by the best of

judges, that it numbers not less than 25,000. Its future is so promising, that in less than the half century predicted by the great naturalist, it will have grown far beyond the utmost vision of his prophecy, a city spreading far and wide its influence in commerce and manufactures.

BUSINESS GROWTH.

In the early history of St. Joseph, its natural geographical position caused a great inflowing of business capital. It is the center of an immense and highly productive agricultural region, which is naturally tributary to it. It thus commands a trade unequaled by any city west of St. Louis, and the growth of its commercial enterprises, is but the history of the growth of the country around. The increase of the wholesale trade is fully twenty per cent. per annum, a suggestive fact taken into consideration, the competition of older and larger cities with their great facilities for shipment, and their active and earnest efforts to control trade. The exclusively wholesale trade is represented by six grocery houses, one of which in 1872 did a business of over \$1,800,000; six dry goods; four boot and shoe; three hardware; two hat and cap; two wholesale clothing; four druggist supplies. The aggregate sales, wholesale and retail, in 1872, were upwards of \$25,000,000. The capital employed in business is rated as follows: \$500,000 and above, 9; \$200,000 to \$500,000, 25; \$100,000 to \$200,000, 40; \$50,000 to \$100,000, 28; \$30,000 to \$50,000, 27; \$10,000 to \$30,000, 95. It has six banks, representing an aggregate capital of \$1,800,000. Its merchants have always maintained a standard reputation for solid capital and solid credit, and in her mercantile capacity, no city has shown more energy or sagacity.

RAILROADS.

On the 22d of July, 1859, the Hannibal and St. Joseph Railroad, destined to fulfill a most important part in developing the great State of Missouri and the West beyond, was finished, and long held the honor of being the pioneer route of the great highway across the continent. The completion of this enterprise was a great event in the history of the city, and added largely to its business facilities. During the following year the Poney Express was organized to carry rapid messages across the country to San Francisco. Every morning the rider started, with his saddle bags strapped to his horse, to deliver the same at the night relay, to the next postman. So, with the rapid and increasing transmission from rider to rider, and horse to horse, on the twelfth day thereafter the enterprising merchant in San Francisco, was reading the rates of merchandize in New York and the eastern cities. In 1865, the Atchison and St. Joseph, and Atchison and Western Railroads, afterward consolidated under the name of the Missouri Valley Railroad, were finished to Kansas City, giving a connection by way of the Missouri Pacific with St. Louis. In July, 1868, the St. Joseph and Council Bluffs Railroad was completed and consolidated with the Missouri Valley, under the name of the Kansas City, St. Joseph and Council Bluffs Railroad—a line one hundred and thirty-three miles long, hugging the banks of the river, and controlling

the trade formerly monopolized by the many lines of steamers that plied up and down the "Big Muddy, and forming a connection with the great national highway, the Union Pacific Railroad at Omaha.

In 1870, the St. Louis and St. Joseph Railroad, seventy-six miles long, was completed, forming another chain of communication with St. Louis, by way of the North Missouri Railroad. In February, 1871, the projection of the Kansas City, St. Joe and Council Bluffs Railroad up the Nodaway Valley, rich in fertility, and producing immense crops of corn and wheat was completed to the Iowa State line; and in December of the same year, it made connection with the Burlington and Missouri River Railroad, thus opening a new and important route to Chicago, and the East.

The St. Joseph and Denver City Railroad is completed two hundred and twenty-six miles, to Hastings, and graded within a few miles of Kearney, and will, at an early date, the coming year, unite with the Union Pacific at Kearney Junction, forming an important link in the route to the Pacific coast, saving seventy miles in the routes from New York to Denver at present traveled.

THE MISSOURI RIVER BRIDGE.

The St. Joseph Bridge Building Company was organized and incorporated in January, 1871, by the citizens of St. Joseph. The preliminary survey was made in February, which resulted in finding rock at a depth of from forty to forty-eight feet; and on the 15th of March, the engineer, Col. E. D. Mason, reported to the Company, recommending the site selected, and estimating the cost of a bridge at \$715,000. On the tenth of June the contract was let to the Detroit Bridge Company at \$710,000. The contract provides that the bridge shall have six piers, each three hundred feet; a draw span span three hundred and sixty-three feet, and a shore span eighty feet in length. The style of the bridge to be a quadrangular, Pratt truss. On the 2nd of January, 1872, pier six was completed; pier five, February 2nd; pier four, March 13th; upper draw rest, May 21st; pier two, November 6th (the long delay in sinking being caused by the three months' high water); pier three, January 25th; and the work of sinking pier one is now progressing. The span between pier five and six is finished, and that between four and five partially; and it is predicted that within sixty days after the breaking up of the ice, the whole superstructure, which will weigh 1425 tons, will be completed. The total cost of the bridge will be about \$1,200,000, for which the city of St. Joseph subscribed \$500,000, twenty year ten per cent. bonds, and the company issued first mortgage bonds to the amount of \$800,000. It is estimated that when completed the \$100,000 will be left in the treasury.

CHURCHES, SCHOOLS, AND PUBLIC BUILDINGS.

St. Joseph has twenty-two church organizations, and nineteen churches, viz: three Presbyterian, four Methodist, three Catholic, two Baptist, one Congregational, one Episcopalian, one Unitarian, one Protestant Evangelical,

one Jewish, one Baptist, one Methodist, and one Presbyterian missionary chapel. Its pulpit talent is excellent, and all the various religious denominations are in a flourishing condition. It has fourteen public schools, including a High school, with one superintendent, and thirty-two teachers. In the High school, pupils are prepared for admission into any college or university in the country. The value of the school property is \$100,000. Besides her public schools, the city has several large and flourishing private schools, including the Young Ladies' Institute, Academy of Sacred Heart, School of the Immaculate Conception, St. Joseph Day School, and the St. Joseph College, conducted by the Christian Brothers. During the past year Mr. Milton Tooble erected a magnificent opera house, with a seating capacity of fourteen hundred, costing \$125,000. Its stage is 40x60, with a proscenium thirty-two feet, and in its appointments and furnishing it may, without exaggeration, be styled the handsomest auditorium in any western city. The location here of the State Lunatic Asylum for the Northwest, to cost \$200,000, will cause the erection, the present year, of a building highly ornamental to the city. The beautiful convent, crowning the hill, whose golden cross catches the latest rays of the setting sun—

“To tell His life of glory run,”

the many handsome residences, the solid and substantial stores, the Pacific House, of goodly reputation, go to make up a town of unusual solidity and comfort.

MANUFACTURING INTERESTS.

The industrial advantages of St. Joseph have been steadily on the increase, and the active efforts being made to invite hither manufacturing skill and enterprise, together with the natural growth of institutions already established, bids fair to make the city a prominent point for productive industries. There are laudable and earnest efforts being made through an organization, known as the “*St. Joseph Improvement and Manufacturers' Aid Association*,” to encourage and foster manufactures which will consume existing material and supply the wants of the community. No manufacturing undertakings have been started here that have not been successful. The facilities for shipment by means of the various railroads centering here, to any point, and the cheapness of material, with the demand for certain products from the various wholesale houses, gives an unrivaled position to this city for the disposal of articles of productive skill and industry. Being the center of the cluster of cities which have sprung up in the Valley of the Missouri, all of which are within easy railroad distance, it can supply their wants with facility and promptness and command a trade wide reaching in its influence and results. The furniture factory of Lewis Hax is the largest of the kind in the West. During 1872 it turned out \$190,000 worth of furniture of all kinds, using for this manufacture 250,000 feet of walnut, and over 300,000 feet of pine and cottonwood—all native growth, except the pine. He employs one hundred hands—men and boys.

The woolen mills of George Buell manufactured 70,000 yards of cloth, and 40,000 pounds of yarn. He employs forty-five hands.

The saddle and harness factory of Wm. Newyeth & Co., manufactured 20,000 collars, using forty tons of straw. They also made 4,000 whips, 1,200 sets harness, and 3,000 saddles. They employ fifty-two men and boys.

J. C. Dandis produced \$60,000 worth of material, and employs thirty-five men.

J. Pfeiffer & Son manufactured stone work to the extent of \$150,000, shipping to Chicago for six new buildings there.

The St. Joseph Starch Factory is a branch of the Madison Starch Factory of Madison, Indiana. It was located here through the efforts of the citizens, and commenced operations in November, 1872. It consumes 1,000 bushels of corn per day, averaging twenty-four pounds of starch to the bushel. Its buildings cost \$50,000, and its working capital is 30,000. Its president is O'Neill Bayley. This company is shipping largely to Germany. It employs eighty men and boys.

The two foundries of Burnside, Crowther & Co., and Ambrose, Ford & Co., turned out \$160,000 of foundry and machine work, employing forty-eight hands.

There are one cracker and spice mill, four manufactories of boots and shoes (three of which commenced business in 1872), four flour mills, one distillery, three breweries, several small wagon factories, etc. The business of pork packing is largely represented, upwards of 100,000 hogs having been packed the past season.

CONCLUSION.

St. Joseph has enjoyed from the beginning only continued prosperity, except from 1861 to 1865. She has improved her streets until now she has thirty-five miles of macadamizing. She has increased her railroad facilities until now she commands communication with every section of the country about her. She has multiplied her mercantile advantages until now she represents in her wholesale trade a stock unequalled by any city west of St. Louis. She has inaugurated a school system so that her educational advantages stand among the first. She has fostered and encouraged manufactures so that they have grown into remunerative enterprises of great productive capacity, and she invites men of capital and skill to a field which will yield all their ambition can ask for or fond hopes desire to realize.

SEDALIA.

Sedalia, Missouri, has been widely and favorably known for the last five years as an unusually thriving and beautiful young city, and was early in its precocious life christened by its admirers "the Queen of the Prairies," and the thousands of travelers and strangers that have annually visited it since, have acknowledged the appropriateness of this appellation, whether hailing from the colder climate of the more northern States or the warmer climes

and summer skies of the sunny South, from the granite hills and rock-bound coasts of the Atlantic States, or the gold and silver laden mountains and valleys of the Pacific slope; and they alike admired the elegance and beauty of the palatial residences that adorn its beautiful Broadway, which extends for nearly two miles through the heart of the city proper, and for nearly a mile upon the highest swell of the rolling prairie which this enterprising young city crowns.

This street is *one hundred and twenty feet in width*, and is ornamented with four rows of thrifty young trees, set out when Broadway was first opened, about twenty-five feet apart, with a roadway sixty feet wide in the center, neatly turnpiked by the enterprising property-holders on either side. Broadway, with ten years' growth added to its thousand trees, and its hundred additional elegant residences, will be one of the most attractive and beautiful streets that can be found in any of the thousand beautiful and thriving towns that crown the broad and fertile prairies of the West, between the Father of Waters and the "setting sun," and will render Sedalia doubly beautiful.

On this magnificent avenue are the elegant mansions of General George R. Smith, the founder of the city; Cyrus Newkirk, the President, and Col. A. D. Jaynes, the Cashier, of the First National Bank; Ex-Mayor Parker, D. H. Smith, and others of our wealthy and influential citizens, and an imposing \$40,000 Public School building.

One mild, bright day last December, we were permitted, by the courtesy of General Smith, to study the panoramic beauties of the landscape from the observatory of his elegant residence. The northern view from it presented a charming landscape even at that season of the year. Three miles away to the north could be seen the "spires and smoky turrets" of the pretty village of Georgetown, the former county-seat of Pettis county, with a belt of timber and a meandering stream between, while beyond the bluffs of the Muddy and the timber belts, were the high swells of the prairie, which shut out the view miles away to the north. To the West the broad belts of timber that mark the windings of the Muddy, added beauty to the view; seven miles distant was the pretty and quiet little village of Dresden, while the beautiful swells of the prairie beyond, in gentle undulations faded away in the distance toward the border of Johnson county.

On the south, another belt of timber marked the course of Flat Creek, from far away in the southwest, and Spring Fork from the south, which unites with it a short distance above the water-works, three miles from the city, the smoke of which, from their never-slumbering fires, is always to be seen, hanging like a drapery of clouds above the then bare and leafless trees, while farther to the southeast the widening belts and larger swells of the prairie beyond this creek, in its eastward flow, seemed to clasp hands with the blue arch above, and kiss the sunny skies in the hazy distance, miles beyond where the "argentiferous galena" lies hidden in the fruitful bosom of old Pettis' rich and fertile prairies that bound the vision in this direction; while miles

to the east, Farmers' City and Smithton mingled in the dissolving views of human vision in that direction.

In spring, summer and early autumn, when old mother earth is bedecked in her mantle of green, the first exclamation that escapes from the admiring beholder, when this lovely landscape first meets his eye, is "O, how beautiful!" and truly, but few towns in the West have such beautiful surroundings.

This much we say by way of shading our pen picture, and now we proceed to the picture itself.

ITS LOCATION.

Sedalia is the county seat of the fertile, well-watered and populous county of Pettis, and is situated on the Missouri Pacific Railroad, 189 miles west of St. Louis, the "future great city," 96 east of Kansas City, the thriving metropolis of Western Missouri. It is at this point that the Lexington Branch diverges from the Missouri Pacific, and it is also at this point that the Missouri, Kansas and Texas Railway, the great through line from Chicago to Galveston, Texas, crosses the above road.

It is regularly laid out and delightfully and centrally located in the geographical centre of the county, and on one of the highest swells of the beautiful rolling prairie, by which it is surrounded in almost every direction. The profile of the Missouri, Kansas & Texas road shows that its site is the highest point on the line of that road, between Moberly on the North Missouri road, and Fort Scott, Kansas.

It has long been noted as the commercial, manufacturing and railway metropolis of Central Missouri. It was laid out in 1860, and in 1861 it became the western terminus of the Missouri Pacific Railroad, and though a military post until the close of the war, in 1865, it then contained but about one thousand inhabitants.

The beauty of its location, the healthfulness and salubrity of its climate, the fertility of the surrounding country, and the energy and enterprise of its inhabitants, attracted many of the officers and soldiers of both armies, who became acquainted with the many advantages and inducements that Sedalia and Pettis county held out to industrious and enterprising men, whether they possessed MUCH or LITTLE capital besides; and these brave sons of Mars, hailing from almost every State in the Union, induced many of their friends and companions to come with them to this inviting country, rich in its undeveloped agricultural and mineral wealth, only waiting for energy, industry and capital to develop and utilize them. So successful were they in this, that, although but twelve short years have elapsed since the virgin prairie of this portion of the "old Smith plantation," was laid off into town lots, yet so wonderful has been its growth in this time, that it is now the chief agricultural, commercial, manufacturing and railway center—the chief metropolis of this portion of the State—containing over EIGHT thousand of as enterprising, public-spirited, energetic and intelligent inhabitants as can be found in

any city of its size in the United States. In proof of this we cite the fact that Sedalia has been lighted with gas for the last five years, and has had the famous Holly system of water-works in successful operation for nearly six months. A school system and school buildings, second to no city west of St. Louis, one of the buildings erected five years since, at a cost of \$40,000, another three years since, costing \$10,000, and the third for the colored pupils, costing \$3,000.

It has eleven church societies and elegant and comfortable church buildings. It has two first-class and popular hotels, and another nearly completed, and several of less pretensions; two National banks and one private one; three foundries and machine shops; one agricultural implement, and one first-class carriage manufactory; a first-class flouring mill, with a capacity for making four hundred and ninety-nine barrels of flour per day; three live daily and weekly papers, and is the headquarters of the Missouri, Kansas & Texas Railway Company, and here are located its machine, paint and repair shops, round house, etc., and the Missouri Pacific Company have already bought extensive grounds, and commenced the removal of all their shops on the road, outside of St. Louis (from Jefferson City, Holden, Kansas City and Atchison), to this point, and the foundation for its mammoth round-house is already completed; a first-class woolen factory, a soap factory, and an energetic board of trade, comprising the active business men of the city; a mechanical and agricultural association, one of the largest and most successful in the State, whose premium list last year was over \$12,000, and its grounds are among the largest and best arranged in the country, comprising about fifty acres in the western part of the city, with a splendid floral hall and amphitheatre, capable of seating ten thousand persons, and more than half a mile of stalls for horses and cattle. It has an incorporated library association, a year and a half old, whose rooms are among the finest and best furnished in the West—its library containing over a thousand volumes, and its reading-rooms well supplied with the choicest magazines and the leading daily and weekly papers, literary, miscellaneous and political. It has also a public school library, containing nearly a thousand volumes of choice and standard works. It has six Masonic and two Odd-Fellow societies, and over three hundred business firms, and more elegant brick residences and business houses than any other city of its size or age in the West.

Its trade for the year 1870, amounted in round numbers to over \$3,000,000; in 1871, to \$3,500,000, and for the year just closed over, \$4,000,000; (on an assessed valuation of \$2,000,000), and its trade is being rapidly extended in every direction into the surrounding counties, and it is fast becoming a jobbing and wholesale centre. Some of the large wholesale houses have their commercial travelers on the road all the time, and have thus worked up, during the past year, sales varying from \$50,000 to \$160,000 per annum. As a wholesale and jobbing point, no off-river interior town has such a flattering prospect as has Sedalia; and in the onward march of progress it is destined

at no distant day to become the "Future Great City" of Central Missouri—its chief commercial, agricultural, mineral, manufacturing and railway metropolis. It has doubled its population, wealth and business, during the last four years, notwithstanding the "hard times;" and from the number, amount and character of the many improvements made during the past season, in the face of an unusual stringency of the money market, we are very sanguine that it will more than double its population, wealth and business during the next four years, judging from the well-known energy, enterprise and business tact of her citizens.

During the year 1871, FORTY-TWO brick business houses, most of them two, and some three story, were erected, and over one hundred brick and other residences, at a cost of several hundred thousand dollars, and during the past year about half as many two and three story brick business houses, and a large number of elegant brick residences, and nearly a hundred other ones, have been completed.

The erection of the machine shops of the Missouri Pacific Railroad in this city the coming spring, will give great additional impetus to Sedalia's growth the ensuing season; and it now has more, and a finer class of elegant brick residences and business houses, and more miles of macadamized streets and good sidewalks, better schools and churches than any city of its size in the West. With all of these advantages, and with coal, iron and lead in inexhaustible quantities underlying "old Pettis," and at the very doors of this city—with all these elements of progress within and about her, who shall dare predict anything but a glorious future for Sedalia.

Last year over 150,000 tons of freight were shipped from this station, and the entire freight and passenger traffic amounted to nearly \$1,500,000, and for 1872, over \$2,000,000; and ere the present year closes this large amount will be more than doubled by the completion of the gigantic young Missouri, Kansas & Texas Railway, which will monthly pour into this city thousands of tons of Texas and Chicago freights; and with the vast and unusually rich agricultural and mineral fields opened up to, and inviting the enterprise and energy of its business men to the rich, ripe and golden harvest awaiting them along the line of this road, from Sedalia to Galveston and the Rio Grande, through which the grand trunk of this road and its branches will penetrate, and instil new life and vigor into all branches of industrial and commercial, agricultural and mineral enterprises, with the elements of which the entire country through which they will pass, abounds in such a remarkable degree.

With its present yearly rate of increase in wealth, population, and enterprise, it needs no prophet "nor the son of a prophet," to foretell that whoever lives to see it ten years hence, will find Sedalia not the future great city of Central Missouri, but the *then* present great one, with a population of not less than 25,000 industrious and enterprising inhabitants, as distinguished and as well-known as those of to-day for their public spirit, intelligence and integrity; and we know of no more attractive and desirable place for all who are seeking pleasant and western homes, good society, schools and churches, or

certain and profitable investments for surplus capital, than to invest in the various agricultural, commercial and manufacturing industries that are so imperatively demanded, and are being so rapidly built up in this progressive and rapidly-expanding young city, whose waterworks are sufficiently ample to supply all that may be needed for a manufacturing metropolis of 50,000 inhabitants. The great question now is, who shall reap the golden harvest awaiting the enterprising capitalists who shall establish, on a grand scale, any of the following much-needed, industrial enterprises, and invest not less than \$100,000 in each; to-wit: A railway freight and passenger car manufactory; an agricultural implement manufactory; a cotton factory; a foundry and machine shop; an elevator and warehouse; pork and beef packing establishment, and many others of equal importance to the industries and trade of the Great West, and on which freight is paid both ways—first, on the raw material, eastward, and then on the manufactured goods, westward—on articles which could be manufactured in the “Queen City of the Prairies” just as cheap, if not cheaper, than in the East; and the margin of freights on them alone, would roll up handsome dividends for whoever will engage in manufacturing them in this city.

KANSAS CITY, MO.

In the history of cities, no town has grown so rapidly as this young emporium of the Missouri Valley. Situated at the great bend in the Missouri river, just below the mouth of the Kansas, it is an admirable position for commercial advantages. It is the centre of a vast fertile territory, whose rich productions will yearly increase its growth, its wealth, and its importance as an inland market. With no rival nearer than three hundred miles, this place will improve with the improving country, developing as it develops, until this town becomes a great and prosperous business mart. The site is hilly and picturesque, commanding a fine view of the surroundings, and blessed with a healthy and invigorating atmosphere.

Twenty-five years ago, Kansas City was known as “Westport Landing,” and enjoyed that modest appellation until 1844, when its corporate name became recognized and known. The town grew slowly until 1850, when the California gold fever was so prevalent throughout the West, and in 1857 was one of the most flourishing places on the frontier. When the war broke out it had a population of 7,000, and a business that was remarkable in its extent and value. The four years’ conflict fell with disastrous force upon the young city. The avenues of trade were blocked, trade was diverted, and the population dwindled down to four thousand souls. With the close of the war, the blockade was removed, and trade began again to flow into its natural channels.

In October, 1865, the first railroad reached Kansas City. This was the Missouri Pacific, and since its completion the history of this “City of the Bluffs” has been one continued succession of commercial triumphs. At that

time the population was barely 6,000, while to-day it is upwards of 40,000. Then, it had but *one* railroad; now *nine* great iron thoroughfares make this point their terminus, and pour into this busy mart their increasing wealth of trade and traffic. To Kansas City belongs the honor of building the first bridge across the Missouri river. It was finished in the summer of 1859, after a work of two years, and at an expense of nearly one million dollars. In the past seven years there has been no "stand still" in the prosperity of Kansas City. Its population and business have more than doubled, while its splendid buildings, its many railways, its increasing wealth, and sleepless enterprise, challenge the admiration of the East as well as the West.

The following are the lines that make Kansas City a great railroad centre: The Missouri Pacific, running to St. Louis, a distance of 283 miles; the Missouri River Railroad, running to Atchison, Kansas, and there connecting with a line that passes through Northern Kansas into Nebraska; the St. Louis, Kansas City and Northern Railway, running to St. Louis, with a branch from Moberly into Iowa; the Missouri River, Fort Scott and Gulf Road, which traverses the border tier of counties of Kansas to Baxter Springs, a distance of 160 miles; the Kansas Pacific, running to Denver, Colorado, a distance of 620 miles; the Kansas City, St. Joseph and Council Bluffs Road, which runs northward into Iowa, and connects at Council Bluffs with the Union Pacific and the line to Sioux City; the Quincy and Kansas City Road, which connects at Quincy with lines running to Chicago and the East; the L. L. & G. Railway, running to the southern boundary line of Kansas, and connecting with the M. K. & T. Railway, and the Kansas City and Santa Fe Railway, completed to Ottawa, Kansas, which makes the ninth iron radiation from the Western "hub." Four more new roads are in process of construction: the Kansas City & Lexington R. R., (narrow gauge), the Kansas City and De Soto, the Keokuk and Kansas City Railway, and the Kansas City and Memphis Railroad. The railway system of Kansas City is the work of but a few years, yet how wonderful is the result. From a village of four thousand it has grown to a city of forty thousand in the marvellously short time of eight years.

Among the most prominent institutions of Kansas City is the Stock Yards. This enterprise was started a little over a year ago, as an outlay of \$82,000. Its success was demonstrated last year in the fact that the commission business alone amounted to over \$2,000,000. There are four packing houses, and in 1871 there was more beef packed than at any other city in the United States. Kansas City is the great beef-packing centre of the continent, and will soon take the lead in the pork trade. 129,000 hogs were barreled last year.

Kansas City may feel proud of her public schools. There are ten elegant school buildings, erected at an average cost of \$10,000 each. The enrollment of pupils last year was 4,078, and the number of teachers employed, 57. The town has 28 churches, many of them large and handsome edifices. The

Board of Trade was organized a year ago last January, and now has a large membership. There are two libraries, the Mechanic's Institute and a law library, that contains 3,000 volumes, and is valued at \$25,000. Another prominent enterprise of the citizens is the Agricultural and Mechanical Fair Association, with a capital of \$100,000. The total receipts of the Fair last year were \$63,990.25, while the attendance one day was as high as 50,000 people. The Fire Department is composed of four fire engines, two hook and ladder companies, and fifty-three firemen. There are now five miles of street railroads in operation.

The actual wealth of Kansas City is put down at over twenty millions. The assessed valuation last year was \$10,957,250. The business for 1872 is as follows: Total hog and beef products, \$1,859,496; manufactured articles, \$1,162,000; post office receipts, \$44,218.97; jobbing trade, \$17,097,176; retail trade, \$5,653,308; expended in building, \$1,011,630; real estate sales, \$3,016,486; insurance business, \$160,537; grain manufactured, \$849,334; while the railroad business for the past year was immense. For public improvements there were \$124,547 expended, which includes four miles of street grading and two miles of sidewalks. Five daily newspapers are published, four English and one German, together with a number of weekly and monthly periodicals. Among the weeklies, is one published in the Swedish language, and among the monthlies is a medical journal, issued under the auspices of the College of Physicians and Surgeons.

In the development of the Great West, with its fertility of soil and boundless natural resources, Kansas City is bound to play a prominent part. She will grow with the growing country, increasing every day in wealth and power; she will wear the golden crown and royal purple, and be hailed, "Queen City of the Missouri Valley!"

ROLLA, PHELPS COUNTY, MO.

Rolla, the county seat of Phelps County, is situated on the line of the Atlantic and Pacific Railroad, about one hundred and thirteen miles southwest of St. Louis. It lies on the high lands, between the Meramec and the Gasconade Rivers. For a long time the terminus of the railroad it became a place of very considerable importance. It still retains much of its trade. The population is about three thousand (3,000). There are several steam flouring, saw, planing, and woolen mills, and two steam manufactories. Its trade in all kinds of goods is extensive and important. Its merchants deal with the inhabitants as far south as the State of Arkansas, and cotton is hauled a distance of from ninety to one hundred and twenty miles, for shipment to St. Louis.

The town has an important trade in peltries, and many thousand of bear, wolf, fox, and other skins, are shipped annually to the East from here.

There are two weekly papers, having extensive circulation throughout the district.

The "School of Mines" (a branch of the State University), endowed by Congress, is located here. Magnificent buildings are to be erected for its use, and it is hoped that it will become, under the able management of Director Charles P. Williams, one of the most important institutions of learning in the State.

There is a large, and well-attended public school.

THE MANUFACTURE OF STEEL,

OR

THE IMPORTANCE OF MANUFACTURING STEEL, AND ITS WARES IN ST. LOUIS AND MISSOURI.

IRON ORE AND STEEL HAIR SPRINGS—MAGNETIC ORES OF DANNEMORA,
SWEDEN AND SHEPHERD MOUNTAIN, MISSOURI—EUROPEAN
AND PITTSBURG STEEL—CLAIMS FOR STEEL WORKS
IN ST. LOUIS—ARTISANS WANTED.

BY HENRY COBB.

On a fair average, in the mine, 100 pounds of iron ore are worth only one cent; but, in a wholesale jeweler's store, the same weight—100 pounds—of fine steel hair springs for ladies' watches, as shown on diamond scales and careful calculations by Eugene Jaccard & Co., are worth more than (\$1,000,000) one million dollars.

What makes the difference?

The skilled labor of the artisan has purified the metal from the dross, and turned the rude, raw material of nature into a delicately refined product of the useful arts.

True, 100 pounds of iron ore will not yield 100 pounds of steel hair springs; but, although the artisan may make only one per cent. of steel hair springs out of the raw ore, still, even then only 10,000 pounds of ore are consumed—worth at the rate stated only one dollar—out of which \$1,000,000 are produced by the skilled labor of the artisan.

The train of thought here started may be conducted with pleasure and

profit to the public mind, and awaken many strong-minded men as well as women to view the miner, manufacturer and mechanic—the skilled workman in the useful arts, the artisan—with more favor and respect than heretofore.

But the hint here given has served its purpose, for present, by gaining a glance at the immense wealth realized in turning a very common raw material into a highly refined and useful article.

The practical point now aimed at, is the production of steel in St. Louis, within the next decemium, to the value of at least \$5,000,000 yearly; while, at the same time, factories for the production of edge and also artisan tools, of cutlery and other steel hardware, of carriage and car springs, of steam boilers, of rails for roads and armor for boats, may be started, which, together with the extension of the bridge, railway supplies, plow and saw works, may, within the same time, yearly pour \$5,000,000 more of manufactures of steel into the store-houses of the solid and liberal merchants of the city.

Without entering into a minute detail of facts sustaining and defending an argument to this end, the \$20,000,000 yearly of breadstuffs and provisions manufactured in St. Louis is a fact of great force.

The yearly consumption of more than 23,000,000 bushels of stone coal and coke in St. Louis—over 20,000,000 bushels of which coal is mined in St. Louis county and the adjoining county of St. Clair, Illinois—and the fifteen iron furnaces of Missouri—seven stone coal furnaces in St. Louis, and eight charcoal furnaces among the mines—having a capacity to produce 133,000 tons of pig-iron yearly, are facts of great weight.

A multitude of other surrounding and vitally supporting forces might be rallied into the ranks of a full argument on the subject—among them the powerful item of more than \$100,000,000 of manufactures produced, amidst more than 310,000 inhabitants, in St. Louis during the year ending June 1st, 1870. But the main element, which neither Pittsburg nor even England possesses, in the production of the best cast-steel, lies close by the door of St. Louis; and that element is the magnetic iron ore, like the Dannemora ore of Sweden, from which the best English cast-steel is made.

Although once—seventeen years ago—so well known that it became a fact of history, yet since—through change of ownership of the property, desolation of the civil war by battle on the spot, and the destruction of much valuable documentary evidence on the subject—for years nothing has been heard on the question of the superior qualifications of the magnetic iron ore of Shepherd Mountain, Missouri, for the production of the best cast-steel, unsurpassed by any steel produced from other iron ores known in America or on the earth.

Recurring to history: In the pages of the *Western Journal and Civilian*, vol. xi., published in 1853-54, the following paragraphs, under the title of "Manufacture of Missouri Iron," may be found, as taken by the author of this contribution, from the lips of the late Horace T. Bailey, an iron master, manager of the works, and an old resident of the Iron Mountain region; a man of great skill in iron, and of pure integrity of character, as is attested by Colonel Boggy.

Omitting many interesting historical items regarding the productions of furnaces and forges there in the days before the railroad, only those facts which bear upon the point in question are here represented as follows:

"The Madison Iron and Mining Company, at Pilot Knob, own the Pilot Knob, Shepherd Mountain, Bogy ore bank; also the Shut-in, Christy, Pratte, and Russell banks; all of which banks are within six miles of the Pilot Knob; the Shepherd Mountain, being only a half a mile distant. The Shepherd, Bogy, Christy, and Shut-in ores are all of the first quality for making iron direct from the ore in the Catalan fire. That of the Shepherd Mountain is peculiarly adapted to the manufacture of steel of all kinds; it is one of the most valuable ores in Missouri, and fully equal to the Dannemora ores of Sweden, from which the best English cast-steel is made. The Bogy and Christy ores partake of the same nature with the Shepherd Mountain ore, and are very valuable for *steel iron*.

"The company have a forge of six Catalan fires making iron direct from the ore at Pilot Knob, capable of turning out 1200 tons of blooms per year. It has been in operation for the last three years, and all its products have been used for steel, manufactured at Pittsburg, Pennsylvania.

"During the year 1853, about 1200 of blooms were sent to Messrs. McKelvy & Blain, and to Singer, Hartman & Co., of Pittsburg, to be converted by the former firm into cast-steel, and by the latter into plow and spring steel."

This evidence is only a part of that which can be furnished to support the claim of the superior quality of Shepherd Mountain ore for the production of the best steel; as, from the ruins of the past, this writer has discovered and been placed in possession of the correspondence of the Pittsburg firms producing steel in 1853-4, in which correspondence, the high rank of the Shepherd Mountain ore is strongly corroborated, as may be instanced by the acknowledgment of the manufacturers, their lively rivalry for the largest quantity of blooms from this ore, and the strenuous efforts made to gain a controlling interest in the mine, as they state, to justify them in sending more skillful workmen to forge the blooms, and investing capital in Missouri for the erection of improved works, with repeated solicitations for blooms from the pure magnetic ore of Shepherd Mountain.

Other valuable evidence, derived from practical sources, might be offered in confirmation of this claim, which seem ignored, but enough is here furnished to awaken an interest in favor of the establishment of large and numerous steel-producing works at St. Louis, rivalling those of Pittsburg, which, according to their report on the production of steel, last year, yielded more than (\$5,000,000) five million dollars in value, while at the same time not a pound was produced in St. Louis.

In order not only to awaken a feeling, but further to rivet and clinch the attention of the public mind on this neglected industrial interest of Missouri steel, the facts stated and opinions expressed by eminent scientific men, on this subject, must be highly prized.

Overman, in his work on the "Manufacture of Iron," published in 1851, at Philadelphia, states, on page 50, on the subject of magnetic oxide of iron, that the black magnetic ore, among other places mentioned, is found in Missouri; and with only a few words on the subject, remarks: "By proper treatment, it affords the very best and safest kind of bar iron; but by carelessness, or by an injudicious saving of fuel, very short, brittle iron. By careful roasting, and the cold blast, Sweden and Russia furnish excellent iron."

In his chapter on the "Manufacture of Steel," page 482, Overman, in a few words, places the steel "derived from common Swedish or Russian iron, both of which were smelted from magnetic ore," and the steel "made from Danemora iron, the latter smelted from magnetic ore," in the high rank of English cast-steel and "the best razor steel from Sheffield."

But a higher authority, bearing more directly on the point, is the private report by the late Professor Benjamin Silliman, Sen., late of Yale College, to a Boston company, who, nearly a generation ago, sought and made investments in the Big Muddy coal beds of Illinois, and in the iron mines of Missouri, mainly between Mine la Motte and the Mississippi river, which report may be found in the possession of Dr. Bidwell.

Prof. Silliman introduces his report as follows:

"In company with an able coadjutor and guide, Mr. Forrest Shepherd, I have, agreeably to your invitation, visited and examined those parts of the mineral lands of Missouri and Illinois in which you are interested, and now beg leave to communicate the result of my observations."

On page 12 may be seen the following paragraph:

"The black iron stone, or magnetic oxide of iron. It is very sensible to the magnet, and is often itself a magnet, then called the loadstone, with north and south poles, attracting and repelling the magnetic needle; it consists of two oxides, the protoxide, which is the most abundant, and the peroxide in much smaller proportion."

Prof. Silliman describes the famous Iron Mountain, Pilot Knob, Shepherd Mountain and surrounding scenery with enthusiasm, and by his word sketches them with an accuracy surpassing photographic pictures.

Treating minutely of the ores of that region, on page 18, Professor Silliman mentions certain peculiar facts, and declares his conclusive opinion as follows:

"Although these ores may be regarded with sufficient accuracy as peroxides, there is some little variety, especially in Shepherd Mountain, where a portion of the pulverized ore is taken up by the magnet, and is therefore in the state of protoxide, since the peroxide is scarcely attractable. On the Pilot Knob I found a piece of a pound weight or more, which was decidedly a magnet, attracting the needle at one point and repelling it at another. Other cases of this kind afterwards occurred, and probably, on careful examination, they would not prove to be rare. As to the capability of these ores to be converted into castings, and also into malleable iron and steel, fitted for every purpose of human society, all doubt has been dissipated by many successful experiments, made in the vicinity and elsewhere, on a scale usually small and

with rude means, but perfectly decisive, as appears from manufactured articles shown or reported to me, and also from the reports of trials made for the government of the United States, as related in the pamphlet herewith transmitted,"

To this powerful testimony of Prof. Silliman, the report of Dr. Litton, of St. Louis, gives additional weight, and furnishes two analyses of these ores. Dr. Litton, assistant State Geologist, with Prof. Swallow, on page 81 of his report states:

"The ores obtained from Shepherd Mountain are the magnetic, the specular, and a mixture of the two. In a specimen of the last variety, from which the magnetic portion was carefully separated by a magnet, there was found twenty per cent. of magnetic iron ore.

"The specimens of ore from the different parts of the Janis vein were analyzed, and gave the following results. Both were compact, and the second was taken from the greater depth:

1 gave Silica.....	1.04
Alumina.....	0.60
Peroxide of iron.....	98.30—68.83 iron.
2 gave Silica.....	1.81
Alumina.....	Trace.
Peroxide of iron.....	99.18

Numerous European authorities at hand might be quoted to prove that the best iron and steel from Sweden and from Russia, as heretofore stated by Overman, is derived from the magnetic ores, such as those of Shepherd Mountain are clearly shown to be; and much more light should be thrown on this subject, especially regarding the adaptability of the rich and popular specular ores of the Iron Mountain, the red oxides of the Meramec mines, and other ores of Missouri, for the production of steel, by the Bessemer and other improved methods.

On the authority of Robert Hunt, the most eminent statistician of England, the production of steel in 1868, was stated in the last edition of Ure's Dictionary, as follows:

	Tons.	Value.
France produces	14,954	£ 443,850
Prussia.....	5,453	170,824
Austria.....	13,037	321,073
United States.....	10,000	212,500
England.....	40,000	1,470,000

The same figures for quantity are, however, also found on the last page, 288, of Fairbairn's Work on Iron, published in 1865. The product has vastly increased since then; and the Bessemer process has given a new era to steel production.

The United States tariff on steel averages about 30 per cent. on bars, ingots, sheets and coils, and about 45 per cent. on edge tools and other manufactures of steel.

The amount of capital in St. Louis is well known to be greater than the amount in Pittsburg, and if the statement is doubted, it may be easily proved, as in their report for 1870, the manufacturers of Pittsburg claim only (\$90,000,000) ninety millions of dollars in value of their products, while the United States census shows that in the same year the manufacturers of St. Louis produced more than (\$100,000,000) one hundred millions of dollars in value of their products, even though among the items the Pittsburg manufacturers claim that "the aggregate value of the production of *their sixty-five glass factories* is estimated to be nearly seven millions of dollars, annually, or about half of the total value of all the glass manufactured in the country," while that of St. Louis was reported by the United States census, for the same year, at only \$399,500.

The exact statement of the manufacturers of steel in Pittsburg, condensed, in the words and figures of their report, is as follows :

"The capital invested in these nine establishments cannot be less than \$4,000,000. The annual products amount to 18,500 tons. The sales of the various establishments for the year ending 1870, amount in the aggregate to a total of \$5,460,000.

Missouri blooms are quoted along the Ohio valley at a higher price—\$90, \$95 and \$100 per ton, than blooms from other States—\$75 to \$85 and \$92.50 per ton—and new bloomeries in St. Louis and along the Iron Mountain railroad have been lately started to make iron for the steel works in Pittsburg.

The profit on the manufacture of steel rails in St. Louis is estimated by Mr. Rosenberg at more than 50 per cent. per annum.

The main question now left is, How can the skilled labor of the artisan in this cast and spring steel branch of industry be secured from England, France, Germany, and our Atlantic States, so that St. Louis, where now not a pound of steel is produced, may soon rival Pittsburg in the production of these useful articles, to the value, yearly, of more than \$5,000,000?

APPENDIX.

THE ST. LOUIS MUTUAL LIFE INSURANCE COMPANY.

Is the leading financial institution of the great West. Its rise and progress presents a fair illustration of the rapid, yet substantial growth of St. Louis during the past few years, and of the quickness of the American mind to appreciate whatever is really valuable and meritorious in new schemes of business.

Twenty-five or thirty years ago, life insurance was scarcely known in this country. Now there are seventy to eighty companies, some of which have attained proportions not reached by European companies short of a century of existence.

This Company controls assets to the amount of some seven millions of dollars, which are increasing at the rate of a million or more annually. It has paid out nearly five millions of death losses, dividends, and other claims; and has an annual income of nearly three millions. It has established agencies in nearly every State and Territory in the Union, and in Canada.

The Company was first chartered in 1857, and was organized on the 18th of November of that year, as the St. Louis Mutual Life and Health Insurance Company, with a guarantee capital of \$50,000. The officers were Dan'l H. Donovan, President; Samuel Willi, Vice-President; Henry Stagg, Secretary.

On the 1st of May, 1858, Mr. Stagg resigned the Secretaryship, and was succeeded by William T. Selby. In November, 1858, Mr. Donovan and Mr. Willi, changed place, the latter becoming President and the former Vice-President.

In February, 1859, the charter was amended, on Mr. Selby's recommendation, so as to confine the business of the Company to the insurance of lives of persons, the guarantee capital was authorized to be cancelled, and for it was substituted a capital stock of one hundred thousand dollars, which was promptly subscribed.

In January, 1859, Mr. Wm. N. Benton was appointed General Agent, which position he held until the close of the year 1870, when he became, from choice, the manager of the St. Louis City and County Department.

The present charter was adopted in 1861, when the Legislature of the State passed "An act relating to the St. Louis Mutual Life Insurance Company, to reduce to one act the several acts heretofore passed in relation thereto, and to amend the same."

By this charter the following gentlemen were appointed corporators, viz: Samuel Willi, John W. Wills, Dan'l H. Donovan, Chas. W. McCord, Chas. H. Peck, Rob't Fisher, Francis Beehler, John F. Thornton, Sam'l Kirkman, George R. Robinson, John Hogan, and Herman Achenback. They were authorized to increase the number of directors to twenty-one, which was done in April, 1861.

In January, 1866, Mr. Willi retired from the presidency, and was succeeded by D. A. January, the eminent merchant. Mr. Donovan having left the State, Mr. James H. Lucas became Vice-President, and held the office until 1867, when he resigned to take the Presidency of another company, and was succeeded by Mr. Chas. H. Peck, the present President of the Company.

In June, 1871, Mr. January, in contemplation of an extended tour to Europe, resigned, and was succeeded by Mr. Peck. Mr. Wm. T. Selby was at the same time elected Vice-President, and the other offices were filled by their present incumbents.

For the first few years of its existence, owing to the fact that Life Insurance was a new business and little understood; and later, to the occurrence of the war, the progress of the Company was slow.

On the close of the war, however, as prosperity and confidence returned, and Life Insurance came to be more generally known, and better understood, the business of the Company began rapidly to increase.

The following table exhibits its progress from 1863 to the end of 1871 -

1863, Policies issued.....	231,	Assets on December 31.....	\$ 222,547
1864, " "	574,	" "	430,990
1865, " "	948,	" "	750,114
1866, " "	2,701,	" "	1,395,162
1867, " "	4,576,	" "	2,609,747
1868, " "	4,668,	" "	3,619,670
1869, " "	5,230,	" "	4,507,066
1870, " "	6,604,	" "	5,518,971
1871, " "	4,238,	" "	5,821,625

The year 1872 has not yet closed, but will, no doubt, exhibit a large increase of business over the year 1871.

The above results sufficiently attest the merit of the gentlemen who have so successfully managed the business of this prosperous company. It may not be injustice to others, however, to say, that the Company is very largely indebted for its success to the labors of Mr. Wm. T. Selby and of Mr. Wm. N. Benton.

The former filled the office of Secretary from May, 1858, until June, 1871, a period of over thirteen years, during which he successfully managed all the office details of a business far more complicated and perplexing than any other with which we are acquainted, and won general confidence by his ability and integrity of character. He is really entitled to be called the Father of the Company. Mr. Benton was the General Agent from January, 1859, to December, 1870, a period of twelve years, and was one of the most indefatigable and successful workers in this line of business in the United States. The well-

known name of D. A. January has been a tower of strength to the Company. During his Presidency of over five years, the institution assumed its place among the leading companies of the country, acquired an enviable reputation for honest and skillful management, and its assets increased from a few hundred thousand dollars to nearly six millions.

The present President, Mr. Chas. H. Peck, has always been a valued member of the corporation. Like Mr. January, he is one of the self-made men of St. Louis, and has been very successful. By his energy and business sagacity he has amassed a splendid private fortune; and is in every way competent to preside over the intricate affairs of a large and growing life company. Under his supervision, aided as he is by an experienced and able corps of assistants and Board of Directors, we may expect this institution, in a few years, to place itself abreast with the leading companies of the East and of Europe.

Below is a complete list of the present officers and Directors :

OFFICERS.

CHAS. H. PECK,	- - - -	President.
WM. T. SELBY,	- - - -	Vice-President.
ALEX. P. STEWART,	- - - -	Secretary.
J. S. MILLER,	- - - -	General Manager of Agencies.
J. G. CATLIN,	- - - -	Cashier.
W. E. HARVEY,	- - - -	Actuary.
WM. M. McPHEETERS, M. D.,	- - - -	Medical Officer.
JNO. T. HODGEN, M. D.,	- - - -	Consulting Physician.
CLINE, JAMISON & DAY,	- - - -	Legal Advisers.

DIRECTORS.

OLIVER GARRISON,	WM. T. SELBY,
SAMUEL WILLI,	NICH. SCHAEFFER,
THEODORE LAVEILLE,	WILLIAM T. GAY,
CHAS. H. PECK,	WM. C. JAMISON,
LEVI L. ASHBROOK,	R. P. HANEKAMP,
JULES VALLE,	L. H. BAKER,
GEO. R. ROBINSON,	D. A. JANUARY,
ROBERT E. CARR,	WM. J. LEWIS,
JOHN F. THORNTON,	JAS. O. CARSON,
DAVID K. FERGUSON,	JACOB TAMM,

HON. JOHN HOGAN.

Several of the State agents, by their energy, enterprise and success, have entitled themselves to special mention, as among the effective workers in building up the company. Among them are S. K. Foote, Louisville, Kentucky; Major George Johnson, (formerly Geo. K. Mitner & Co.,) Alexandria, Virginia; J. M. Street, St. Joseph, Missouri; Gregory & Houston, New York; J. G. Lonsdale & Co., Memphis, Tennessee; R. R. Sloane (formerly Frank Remington,) Cleveland, Ohio; J. E. Godfrey & Son, Atlanta, Georgia; N. P. Dolen, Houston, Texas; E. P. Taylor, St. Louis; Harmon Doane, New Orleans; John O. Osborne, Chicago; W. P. Adams, Philadelphia; T. J. Rutledge, Opelika, Alabama; E. A. Whitcomb, Indianapolis; E. C. Morton, Little Rock; Carey W. Lambeth, Nebraska; M. S. James, St. Paul; J. M. Sears, Mobile; R. A. Diver, San Francisco; J. D. Ferree, Keokuk; R. S. Baird, Toronto.

The Company having a large and increasing amount of assets, be be safely and permanently invested, thought it wise to apply a small portion of these funds to the erection of a building that would supply their office room, and afford an income besides, from rents. The result is the magnificent structure at the corner of Sixth and Locust—a building alike worthy of the genius and reputation of the distinguished architect, Geo. I. Barnett, and creditable to the enterprise and business sagacity of the Company. There is no doubt the building will furnish the Company with office accommodations without cost, and afford in rents a handsome income on the investment. It is the handsomest architectural ornament St. Louis possesses, and marks the beginning of a new era in the style of architecture in our great city.

DRY GOODS OF ST. LOUIS—DODD, BROWN & CO.

The dry goods business of St. Louis for the spring trade promises to be the most active of any corresponding season for several years. A large number of merchants from different sections of the country are already here.

The wholesale house of Dodd, Brown & Co. is literally crowded with buyers and salesmen. The passenger elevator is almost constantly in motion, conveying customers to the different floors of their spacious building, 100 by 150 feet, five stories high, with basement. The business transactions of the house in 1872 excelled in magnitude that of any similar house in St. Louis, and judging from the grand opening for the spring trade, their sales will far exceed in 1873 those of 1872.

Messrs. Dodd, Brown & Co. have already received one of the largest and best stocks of all lines of foreign and American dry goods and notions ever brought to St. Louis. Their stock of ladies' dry goods, such as pure mohairs and black alpacas, Japanese poplins and silks, Pongee silks, grenadines in plain and fancy colors, striped and fancy goods of all styles, is superior in quality and greater in variety than can be found in any similar house west of New York.

Their large invoice of jaconets, lawns, percales, etc., is very attractive. Their stocks of prints, sheetings, etc., is unequalled by any wholesale house in the West, and their endless variety of notions embraces about everything known to the markets of our country coming under the head of notions. This house has 90,000 square feet of space, upon which is transacted their immense business. The piles of goods upon each floor are really a grand sight. Here can be seen, in a few hours, samples of all the world's industry in the dry goods line.

Messrs. Dodd, Brown & Co., at the establishing of the house, determined to pursue a more liberal policy than had been practiced in St. Louis for a series of years.

They had the sagacity to foresee that the true policy to follow, in order to

concentrate a trade in St. Louis, was to buy in large quantities, and sell on a very small margin, by which they were able to duplicate New York quotations. The result has been that, in the short space of seven years, they take rank with the largest and most popular dry goods houses in our country.

They are among the most enterprising and responsible business houses on the western continent, and have contributed much in the centralization of a large trade to St. Louis, which formerly dealt in New York, Boston or Philadelphia.

This house is emphatically the headquarters for the merchants residing west of the Missouri river, and does a large business in New Mexico and the Southern and Southwestern States. They are offering inducements for the spring trade that will bring to them a very large trade that formerly dealt elsewhere.

BOOT AND SHOE TRADE.

St. Louis is eminently the boot and shoe market of the Great West. Her merchants are men of ample capital, and fully up to the wants of the age. They carry larger stocks and a more varied assortment than can be found in any city in this country, and these are constantly reinforced and freshened by all the novelties of the season as they appear. In no branch of mercantile industry has there been greater ability displayed than in the management of the boot and shoe business for the past ten years, and to-day there is no market East or West where buyers from the Mississippi Valley, and the States and Territories beyond, can be so well suited as in St. Louis. At present the volume of trade is in goods of Eastern manufacture—mainly from the shoe districts of which Boston is the great center, though the productions of New York, New Jersey, Pennsylvania, Maryland, Ohio and Michigan find a ready market. Within the past few years, however, there has been a growing demand for a more peculiarly western and a better class of goods than can be obtained from eastern manufactories. To satisfy this demand, home production has become a necessity, and now St. Louis has fairly put in her appearance as a manufacturing city in this department. Some half a dozen or more manufactories are already in successful operation, and finding rapid sale for all they can produce, the principal ones being Appleton, Noyes & Co., Giezike Bros., and Brolaski & Co. The total amount sold annually in St. Louis may be estimated with tolerable accuracy as follows: \$15,000,000 to \$17,000,000 at wholesale, and \$2,500,000 to \$4,000,000 at retail, or a total of about \$20,000,000.

The house taking the lead in this line is Appleton, Noyes & Co., whose business does not vary much from \$2,000,000, inclusive of goods produced in their own factory. This firm commenced business in the fall of 1862, on a small scale, with small immediate expectations, while the cannon of hostile armies were thundering along the whole line, and their present position is the result of that resistless energy which makes great achievements possible. And

this spirit of progress and determination to equal the demands of this new era in her history, is fully awakened and is hereafter to characterize increasingly the *new*-thoroughly aroused and vitalized St. Louis, and will assuredly place her on that proud eminence toward which her destiny is pointing and beckoning the future great city of the world.

THE IRON FOUNDRY OF MESSRS. SHICKLE, HARRISON & CO.

The extensive establishment of Messrs. Shickle, Harrison & Co. is one of the largest and most complete in the country, and is truly a credit to our city. The firm, which is composed of Frederick Shickle, John W. Harrison, and Thomas Howard, succeeded the old and well-known firm of Thomas Howard & Co., who were located on the corner of Eighth street and Clark avenue, and who established and ran for many years, the Excelsior Foundry at that place. Finding the space rather contracted on Clark avenue, the new firm purchased the ground which they now occupy, and commenced the erection of buildings sufficiently spacious to accommodate their large and constantly growing business. The buildings now used by them cover an area of four acres, running north and south from Gratiot street nearly to Chouteau avenue, and extending west from Twelfth to Thirteenth street. Three hundred and fifty hands are employed; from eight to ten thousand tons of iron used annually, and the sales amount to over a million dollars per annum.

Possessing all the latest improvements in machinery, Messrs. Shickle, Harrison & Co. have every capacity for doing the largest class of castings that can be made. The iron principally used is Missouri iron, made at the Scotia and Carondelet furnaces, and Scotch pig iron. The plant consists of a foundry and machine shop for the manufacture of architectural works, and piping for gas and water. A great feature in the foundry proper, which is separated from the finishing and pattern shops by Papin street, is a system of steam cranes and derricks so arranged as to enable the workmen to handle and shift from one end of this large building to the other, castings weighing as much as twenty tons. Two of these cranes are particularly worthy of mention as they are the only ones of the kind in the country. They were designed by, and built under the personal supervision of Mr. Frederick Shickle, and command the most unbounded admiration of all iron manufacturers who have seen them. Built entirely of iron and run by steam, they work with an accuracy almost human. The smaller of these cranes is capable of handling a ten-ton casting, and cost five thousand dollars. The other cost eight thousand dollars, and has a capacity of twenty tons. Surrounding each of these cranes are the pits wherein gas and water piping is cast.

Opposite, and just north of the foundry, is the finishing shop, in which are located many expensive and complicated pieces of mechanism used in polishing, finishing and perfecting the castings turned out from the foundry. The finishing shop is connected with the foundry by a series of railroad tracks, which render the transfer of heavy castings a comparatively easy affair.

ST. LOUIS TYPE FOUNDRY.

Among the oldest and most important manufacturing establishments in our city, and one in every way worthy of mention, is the St. Louis Type Foundry, established in 1840, and which has grown from a small concern, occupying limited quarters, in an alley between Main and Second, and Market and Chestnut streets, to its present mammoth proportions—requiring two buildings, on the north side of Pine street, with ten floors 18x20 feet each, or a space, if all were on one floor, of 19,440 square feet.

This establishment manufactures everything required in a printing-office, except cylinder and the various job presses now so popular with the trade. Of these articles, however, it keeps a number in stock, suited to the trade of the West, and ready for shipment at the shortest notice.

We recently passed through the buildings, and were surprised at the immense business conducted by this house. Ascending, by means of a powerful steam elevator to the fifth floor, we found about a dozen type machines, with operators apparently grinding out types, while a crowd of boys, technically known as "breakers," were removing the jets left on the type by the machines. From this department type passes to the finishing room, where a large number of girls are employed in rubbing, kerning, setting, etc., and through whose hands the type passes to finishers, who smooth body-ways, and groove the characters at the bottom. After all this manipulation, the type in "sticks," is placed on stands, and critically examined with a magnifying glass, all imperfect letters being discarded; after being wrapped in paper, and properly marked, the type passes to the salesroom shelves.

In another room about half a dozen men were employed in making brass rule of various designs, labor-saving metal furniture, slugs, leads, etc., while machinists were repairing old, and building new type machines for use in the adjoining apartment.

On the fourth floor we found the electrotyping department in full blast, engaged on cuts, book and blank work, etc. The details of the process of electrotyping are very interesting to an observer, but limited space compels us to pass with this brief allusion.

Adjoining this department is the case workshop, where a number of skillful artisans are engaged in making cases—all styles—cabinets, stands, and furniture peculiar to printing-offices.

We found the third floor wholly occupied by the machine shop. Here is manufactured the famous Washington Hand Press, of various sizes, while rebuilding and repairing all kinds of machinery is also a specialty. In this shop we noticed three hand presses, a large Hoe cylinder, and three or four smaller job presses, in process of repairing and rebuilding. In connection with the machinery department is a finely-equipped blacksmith shop, where chases are made and the necessary forging for presses, etc., is done.

Descending to the second floor, we found it literally packed with fine papers, envelopes and card stock, with clerks busily employed in packing and

shipping to all parts of the country—from Indiana in the East, to California, and from Minnesota to Texas.

On the first floor is the main, or type salesroom. On the left, as you enter, is seen a row of shelving over one hundred feet in length, reaching from floor to ceiling, which is filled with type sufficiently varied to meet the wants of any printer, no matter how fastidious his taste. Here will also be found the various styles and sizes of job presses in use—Universal, Gordon, Liberty, Nonpareil, etc.

Adjoining this department is the storeroom for printing papers, containing piles on piles of the various sizes and qualities of book and news required by the trade.

Descending to the basement, we found a large room, lighted by gas, and fitted up for second-hand machinery. Here we noticed presses of old and modern styles in varied stages of perfection, suited to the wants of printers of limited means, and equally acceptable to more opulent members of the craft.

The book-keeping and financial part of the establishment is presided over by Mr. KAUFFMAN, who has been identified with the house since its incorporation in 1861.

The general office will be found on the first floor, in charge of Mr. WM. BRIGHT, who is secretary and general business manager. This gentleman has, we understand, been in the establishment for the past twenty-seven years, and few indeed are the western printers and publishers who do not know him personally, and favorably at that. His experience is unlimited; during the last ten or twelve years he has had charge of the concern, and its products have been so perfected that they stand equal to the best in the country.

The skilled workmen, clerks, salesmen, etc., employed by the company, number over ninety. In the sales department are practical printers, of large experience who carefully attend to the execution of orders, and at times render valuable assistance to purchasers.

We heartily recommend the printers of the West and South to visit the St. Louis Type Foundry, when in our city. A ramble through its various departments will amply repay you for time so employed.

PORCELAIN MANUFACTURES.

L. U. REAVIS, Esq.—

Dear Sir: In your many valuable works, setting forth the great advantages of the West, and of St. Louis in particular, for becoming at an early day a great manufacturing city, you have sung loud, long and well, of the Iron, and several other mineral interests which abound in great purity and profusion in Missouri, and the States and Territories tributary to St. Louis as a great manufacturing center.

With the mere mention of the existence of potter's clays, fire clays, sand,

etc., you seem to have overlooked largely, the important branch of productive industry they enter so largely into, and which, if properly cared for and fostered by the monied and enterprising men of St. Louis—will soon make this city as celebrated for its fine porcelain china, and parian wares, as Staffordshire in England, or Sevres in France.

We may justly pride ourselves in the varied, rapid and wonderful developments in the manufacture here, of iron, zinc, silver, lead and other useful metals in the last few years. These are in keeping with the astonishingly rapid increase of population and growth of cities and towns all over the "Great West"—and in keeping with these, should come forth all the production of every other necessary article of common use.

I came to St. Louis in May, 1857, and took a small interest in a pottery at Upper Alton, Ill., in 1859 since then I have been gathering careful data of the location, and qualities and quantity of clays, kaolins, spars, flints and other ingredients, found in Missouri and the West, and necessary in the manufacture of fine porcelains. The coarser kinds of crockery, common stone ware, red ware, fire bricks and tiles, stone ware pipes, etc., etc., seemed to be the ultimatum of all clay manufacturers ambition. Most of these productions, until within a few years, were rough and rude, in finish and utility far below desirability. The production of these articles did not consume or require the finer clays, which are as abundant comparatively, and in as great variety as are iron ores.

In 1872, we established the manufacture of white granite, or iron stone china—and common or C. C. ware, using the clays of Missouri and Illinois, and allowing our customers and visitors to be the judges, "we are producing in great variety, fine table wares, fully equal to the best imported English goods."

Through the courtesy and kindness of citizens everywhere, we are in frequent receipt of choice articles, in use by us, from many of which I am satisfied, the very choicest and finest or hard, or soft, and translucent wares can be made, equaling in quality of materials used, those made in any part of the world.

With workmen of taste and culture, thoroughly skilled in the ceramic art, gathered into shops and properly encouraged here, in St. Louis, as they might and should be, this important productive industry, would rapidly assume large proportions, and yield millions of wealth to our people and city, and importance to the nation.

Over \$12,000,000 worth of crockery was made in one district (Staffordshire England), in 1871. Of this, over \$6,600,000 was sent to the United States that year. Now shall we remain supinely indifferent to this great industry, surrounded as St. Louis is, with inexhaustible supplies of the very best materials for potting, and pay tribute to foreign manufacturers and importers on such goods as can be made profitably at home.

All that is needed, is for the monied institutions and enterprising men of St.

Louis to give these manufacturing interests liberal encouragement, such as nearly every manufacturing interest needs in its incipency, and which is, in most Eastern cities, bestowed to build up, rapidly enlarge, and firmly establish them.

St. Louis, so far inland, and the third city of the Union in population, may rapidly become the first in size—and the great center of every variety of manufactures, turning the eyes of the whole nation to its work shops for supplies, proudly and fully occupying the position so fortunately hers.

Yours Respectfully, H. M. THOMPSON.

MISSOURI CAR AND FOUNDRY COMPANY.

The most gratifying evidences of the growth and prosperity of St. Louis, is the rapid development of her manufacturing industry. Of the various branches that pertain to the manufacture of wood and iron, no city can boast of such progress within the last few years as St. Louis.

Among the most prominent of her recent establishments, is the Missouri Car and Foundry Company. This establishment is only three years old, and yet in growth and character is one of the largest manufacturing companies in the city. It has a paid-up capital stock of \$300,000. The works are divided into two departments. The car department is 1401 North Main street, where are situated the machine, blacksmith, wood, setting-up, finishing and painting shops. This department covers about five acres. The foundry department covers Lami and DeKalb streets, and consists of two brick buildings of 70 by 150 feet. In one is melted twenty tons of pig-iron per day, and this is made into railroad castings. In the other building thirty tons are melted per day, for car wheels. The first year the company built eight hundred cars; the second year two thousand, and the third year three thousand. The establishment has a capacity for turning out twelve freight cars per day, and intend shortly to build passenger coaches. It employs five hundred men, and pays out over \$30,000 per month in wages. It carries a large stock of white oak, and pine lumber. The oak is obtained principally from Illinois, and the white pine from Wisconsin; yellow pine from Missouri, and long-leaf pine from Georgia and Louisiana. The establishment consumes 30,000 feet of lumber per day, bar iron twelve tons, and pig-iron fifty tons per day.

Great care is taken to do the best quality of work.

By means of a combination of the best car-wheel irons to be obtained, metal is gathered in from Maryland, Alabama, Kentucky, Ohio and Missouri; which, together with the purchase, at large expense, of the sole right to the use of Cochran's Patent Annealing Process for car wheels, this company claim to be producing car wheels which cannot be excelled for strength, chill and wearing qualities.

Their product for the past twelve months has been 25,000 car wheels.

They melt daily into railroad castings twenty tons of Missouri pig iron,

mostly from the Carondelet furnaces. They also have an extensive brass foundry, where they manufacture car, locomotive and machine boxes, producing over 1,000 pounds per day.

During the past twelve months the Company have furnished cars to railroads in all directions. The following are a few: N. O., J. & G. Northern; St. L. & I. M. R. R.; Cairo & Fulton; Arkansas Central; A. & P.; I., B. & W.; Great West'n Desp. Co.; C. C. C. & I.; C. D. & V.; Iowa Central; A. S. & Santa Fe; Midland Pacific; Ill. & St. Louis; etc., etc.

OFFICERS OF THE COMPANY:

Hon. Warren Currier, *President*; John S. Newberry, *Vice-President*; James McMillan, *Secretary*; Wm. McMillan, *Treasurer and General Manager*.

A CLOSING WORD.

THUS have I written a new record—a new prophecy of a city central to a continent of resources, whose productive energies are greater than those possessed by all the world besides, and upon which is destined to reside a population greater than now exists on the globe—of a city, which I know will stand upon the American continent “in the latter day,” the grandest material achievement of the civilization of the world—a city, destined to become the all-directing head, and the central moving heart of the great family of man—a city, from out whose throbbing life and comprehensive brain will go forth new laws and new principles of civilization for the better government of states and nations—a city, destined to control the commerce of more than one hundred thousand miles of railway, reaching with equal facility to every extremity of the continent, to gather the surplus products of more than one hundred populous States, and to whose central life more than one hundred continental cities, populous and powerful, as all the present existing cities of the globe, will contribute prosperity and greatness—a city, which, in its perfect development, its territorial expanse, its architectural elaboration, its industrial growth, its commercial supremacy, its financial power, its achievements in arts, its fame in literature, its mental strength, its moral purity, and its perfect government, will flash upon the mind of the human race, and the world will behold in America the city of prophecy—the Apocalyptic City—

“The New Jerusalem the ancient seer
Of Patmos saw.”

All hail! mistress of nations, and beautiful queen of civilization! I view thee in the light of thy destiny! Thou art transfigured before me from thy present state to one infinitely more grand, and which overshadows and dwarfs all civic forms in history.

The influence of thy empire will pervade the world with moral and intellectual force. And thou, vivifying and benignant capital—emporium of trade and industry, seat of learning and best-applied labor, pivotal point in history, supreme and superb city of all lands—I behold thy majesty from afar, and salute thee reverently as the consummation of all that the best human energies can accomplish for the elevation and happiness of our race.

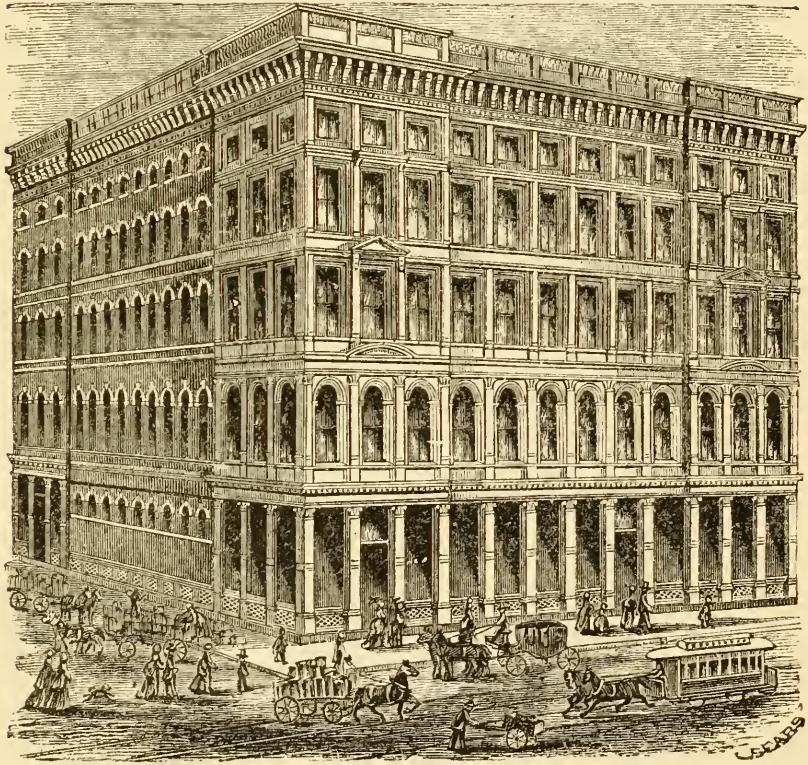
All hail! Future Great City of the World, thou shalt live and flourish

As nations step into rank,
At Time's loud bugle sound.

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❧FOREIGN AND DOMESTIC❧



DRY GOODS!

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